INFORMATION REPORT INFORMATION REPORT

CENTRAL INTELLIGENCE AGENCY

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COUNTRY	USSR	**REPORT**	
SUBJECT	1. First Automobile Repair Plant in Moscow 2. Aviation Engine Plant 45 in Moscow 3. Kim Needle Plant in Kuntsevo 4. Molotov Metallurgical Plant in Dnepropetrovsk 5. Frunze Plant in Sumy	**DATE DISTR.**	31 December 1959
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Attachment No.	Description
1	First Automobile Repair Plant in Moscow. This report contains some brief, general information on the layout, personnel, output, security, and conditions of the First Automobile Repair Plant. It also contains a sketch of the plant layout with 33 points indentified in a legend and an organization chart of the plant.
2	Aviation Engine Plant No. 45. This report contains sketches of the layout of Plant 45, the layout of shop 17, the layout of Plant balconies, and of various parts made The layout sketches are accompanied by extensive legends. There is also general superficial information on power, transportation, raw materials working conditions, education, security, and personnel.
3	Kim Needle Plant. This report contains a sketch of the plant layout and a legend indentifying 40 points. It also contains some information on a part made by the plant which had been ordered by the military. There is a sketch of this part. The report also contains very brief info on raw materials, working conditions, security, and personnel.
4	Molotov Metallurgical Plant in Dnepropetrovsk. This report contains excellent sketches of the plant layout with comprehensive legends. It also contains organizational charts and extensive, specific information on plant production, raw materials, and security.
5	Frunze Plant in Sumy. This report contains a sketch of the plant layout with a legend indentifying 40 points; a sketch of Shop No 3 with a legend identifying 16 points; sketches of plant products; and a sketch identifying related installations in Sumy. The report also contains descriptions of plant shops and information on production, materials, power, transportation, storage working conditions, security, and personnel.

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MOLOTOV METALLURGICAL PLANT IN DNEPROPETROVSK

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General

1. The Molotov Metallurgical Plant on Budenovskaya Street in the western outskirts of Dnepropetrovsk was under the jurisdiction of the Ministry of Construction. [redacted] 25X1

[redacted] It was close to, and east and north of, the Petrovka and Lenin Plants. (See overlay, attachment No. 5.) The plant area, measuring about 500 (frontage) x 250 (depth) meters, was partly enclosed by a 3.5-meter-high red brick wall without barbed wire topping, and partly by the buildings themselves. [redacted] the plant had no secret 25X1

sections or underground installations; [redacted] however, [redacted] 25X1

" fruits and vegetables were preserved " in a manner to be described later. (See paragraph 2, item 22, and paragraph 13.) No new constructions or enlargements of the plant were planned.

Buildings and Installations

2. The following describes buildings and their functions; numbers in parentheses refer to corresponding numbers on sketch of plant layout, (Sketch No. 11).

20) Garage. It was a 20 x 100-meter brick building with a red tile roof with a 60 to 70-truck capacity. The garage was usually only half full. The plant had about 100 trucks, 70 of which were used in the construction of housing for city residents and were not kept in this garage but at others in the new neighborhoods under construction.

The plant garage had a well-equipped repair shop staffed with about 150 workers who kept all plant trucks and earth-moving equipment in repair.

21) Firehouse. It was adjacent to the garage. It had a frontage of ten meters and a depth of 20 meters. Five to six men were stationed there. There was a special firetruck equipped with pumps and ladders.

26) Sheet metal and sections open-air storage. It was a 150 x 60-meter area served by four narrow-gauge tracks, the cars of which were cable-drawn; these cars were used to unload railroad cars which

[redacted] 25X1

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entered the plant on a siding. Sheetmetal was stacked here on the ground in stacks of up to three meters in height. Iron pipes and and bars, coal, etc., were also deposited here. Also stored were cement and brick in large quantities for use in construction directed by the plant. The open-air storage area shown on the sketch was usually entirely covered by the enumerated items.

27) Carpentry shop. It measured 12 x 40 meters, had a glass front, red brick walls and a sheet metal roof. The shop had a great deal of Soviet-made wood-working machinery in good condition. The shop's main work was the production of all wooden components used in construction, although it also produced plant furniture and equipment and crating for plant products. About 70 workers were employed.

17) Office building. It was a three-story brick building measuring 260 or 280 x 25 meters with a sheet metal roof. It housed all plant offices, although each section had its own small secondary office. (See sketch No. 2 for the floor plans.)

22) Wooden sheds with basements. They were used to store vegetables produded for the plant in nearby towns. The plant frequently lent trucks to kolkhozy, which almost always paid for the use of the trucks in vegetables, thus increasing plant stocks. These vegetables were sold to plant workers at reduced prices.

10) Tool and clothing storehouse. It was a 50 x 30-meter brick building with a sheet metal roof. It stored plant tools and clothing (gloves, shoes, etc.) needed on the job.

9) Electrodes shop. It was a 25 x 30 meter red brick building with a sheet metal roof. The shop produced electrodes for plant use and especially electrodes used in welding. About 25 to 30 employees worked in very bad conditions with acids and minerals that produced thick clouds of dust and suffocating heat.

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bluish stone was pulverized and mixed with liquids to form the paste that was used to coat the rods used in welding.

8) Nail shop. It measured about three x 30 meters. It manufactur25X1 nails by cold process for buildings built by the plant and for the crating used for plant products. About ten to 12 employees worked here.

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7) Infirmary. It measured about 12 x 30 meters. A chief physician directed the infirmary and the work of an ear-nose-throat doctor, an oculist, an odontologist, and a surgeon, with their corresponding staffs of nurses and assistants. All personnel were women. The infirmary had an ambulance and gave only initial treatment. When other services were required, the patient was sent to the nearby plant hospital.

6) Dining room. It was a spacious room with a frontage of about 100 meters including kitchens. The dining room was divided into two sections: one for white collar workers and one for laborers.

4) Gymnasium. It had a 60-meter frontage. It contained bars, parallel bars, horses, mattresses, etc.

5) Trade school. It had a ten-meter frontage. It gave classes to unspecialized workers to prepare them for plant work. Attendance was voluntary. Students were given no special privileges, although studying at the school was a decisive step in attaining the grade of foreman or master.

3) An open-air log storage area. It measured 20 x 50 meters. Logs transported to the plant in trucks were stored here. There were many piles from four to five meters high. A machine saw cut the logs into planks which were transported by truck to the carpentry shop (No. 27).

2) Electric power house. It was a three-story brick building 30 meters square with a uralite roof. The ground floor contained four 380-volt transformers, each one meter square by about two meters high, and an emergency Diesel generator sufficiently powerful to supply the entire plant with electricity.

28) Main shop building containing sections No. 1, 2, 3 and 4. The building occupied most of the plant grounds. It was of red-brick with no partitions. Reinforced concrete columns about 15 meters high and spaced about every 50 meters supported a dome glass roof and the rails on which ran 24 overhead cranes. The disposition of these cranes is shown on attached sketch No. 1. Sections No. 1,2, 3 and 4, which carried on the main work of the plant, were separated only by the concrete column

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14) Section No. 1, the riveting section. The riveting section occupied

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an area of 250 x 30 meters and contained 15 or 16 riveting machines on supports about three meters high. These machines were articulated to permit adapting the machine to the plate to be riveted. There was only one type of riveting machine; all were of Soviet make and were produced by a plant located in the Urals. A pneumatic air hammer was also used for riveting.

Besides doing riveting work, the section did joining of all kinds employing nuts and bolts.

Section No. 1 had four cranes; the first was a 30-ton crane and the other three were 15- and eight-ton cranes. The section also had small cars running on three tracks as indicated on sketch No. 1. Each riveting machine had a small coke furnace for heating rivets. From 350 to 400 employees worked in the section on each of the two daily shifts; of this number, about 100 worked with pneumatic hammers (two to a hammer), 60 operated the riveting machines (three to a machine), and 30 worked at joining with nuts and bolts. The section received plate from the storage area (No. 26) and cut it to size with shearing machines or cutting torch.

13) Section No. 2. The section had four bridge cranes; the first was a 30-ton crane and the other three were of varying tonnages. The section was also served by small cars running on three tracks as indicated. Section No.2, measuring 250 x 30 meters, received from section No. 1 by crane or railcar plate, welded to required dimensions, which was rolled to required shapes in section No. 2. Section No. 2 also produced welded pipe; plate was received from section No. 1 and rolled into half-cylinders, two of which were welded together to form a pipe section. The welded pipe was used in irrigation projects; large quantities were produced for irrigation projects in Central Asia.

One of the main jobs of section No. 2 was the production of the steelwork and tubing of blast furnaces. These blast furnaces were usually shipped to China

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Section No. 2 had boring machines, milling machines, drop hammers, and normal-size and " giant " lathes; all machinery was Soviet-made, except for a few lathes or milling machines of German or Czech make that constituted an insignificant part of the total number of

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machines.

The section had 350 to 400 workers on each of two daily shifts; almost all workers were specialized workers, including those charged with securing the crane hook to loads to be transported; it was absolutely forbidden for any other than specialized personnel to do this work because of the danger involved if a load should slip off the hook.

12) Section No. 3. This section produced bridge components (beams, angles, T-beams, plate) from materials received from the storage area (No. 26). These materials were cut to specifications, shaped, drilled, matched, numbered, and the parts were shipped to the bridge site. Section No. 3 produced bridges for installation over rivers, highways, etc. The section had four overhead cranes and was served by the cars running on three tracks as indicated. Its main machinery was a large number of drilling machines, saws, and welding sets, all of Soviet make.

The section had about 500 workers on each of two daily shifts; 15 to 20 percent of these were laborers.

Almost all the Dnepr River bridges had been built by this plant. In 1956 bridges were being shipped to the Lena, Ob and other rivers in the north.

11) Section No. 4. This section produced excavating machinery framework, crane framework and steelwork for use in the construction of buildings and plants. Only the framework of excavating machines and cranes was produced here; these machines were later finished at other plants. The work done in section No. 4 was similar to that done in section No. 3; that is, materials were received from the storage area (No. 26) and used to make the required framework. Machinery used was similar to that used in section No. 3. About 500 employees, about 15 percent of whom were laborers, worked on each of the two daily shifts; almost all workers were specialized " assemblers ".

29) Section No. 5, paint shop. Of the main shop building, this shop occupied an area measuring about 60 x 180 meters; on sketch No. 1, the limits of the paint shop are marked with a dotted line. The paint shop had eight overhead cranes, the rails of which were the

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extension of the rails on which cranes ran in sections No. 3 and 4. These cranes transported all work from sections No. 3 and 4 for painting. The paint shop had no machinery; paint sprayers manufactured by the Petrovka Plant were used. The shop had no characteristics of special interest. About 150 employees worked on each of the two daily shifts; these workers wore masks covering mouth and nose.

25bis) Non-ferrous metals and electric cable storehouse. It occupied one corner of the paint shop (No. 29) and was separated from it by a sheet metal partition about three meters high. The storehouse, about eight x 50 meters, stored copper, bronze, brass, aluminum, etc. and the electric cables needed by the plant.

1,15 and 16) Electric shop. It was divided into three sections as follows: 1)lathe shop; 15) winding shop; 16) fitting shop. These sections were separated by glass screens. The electric shop did all kinds of plant electrical and machine work. It had an eight-ton overhead crane that ran the length of the shop, and a large number of lathes, milling machines, drill presses, etc., almost all of Soviet make although there were a few German or Czech machines. The shop had a glass roof. (See sketch No. 6 for a more complete description of the shop.)

Plant Products

3. The plant produced all the steel work for blast furnaces, besides bridges, excavating machinery framework, crane framework, and steelwork for buildings and plants. The plant was also in charge of the construction of groups of apartment buildings for 1) plant workers, 2) the State. Working on building construction were 1,800 to 2,000 workers, 70 trucks, and many excavating machines, cranes, tractors, etc. Construction work did not interfere with normal plant production because, although it was carried out under the orders and supervision of the plant, trucks used were not kept at the plant, and the masons never went to the plant. The construction branch had its own separate organization and management.

The metallic structures produced at the plant had no special characteristics; when they left the plant, they bore a metal plate with the legend " Molotov Metallurgical Plant. Order of the Red Flag"

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The plant produced nothing for the Army.

Raw Materials

4. All iron used at the plant came from the neighboring Petrovka Plant; non-ferrous metals came in small quantities from another plant [redacted] All metal received was processed so it was only necessary to cut it, bend it, drill holes in it, and rivet it to produce the desired object. The plant did not do any laboratory or foundry work but only assembly work.

Also received at the plant were coal for the heating system and the heating of rivets, oil for use in transformers and the lubrication of machinery, wood for crating and construction, all in small quantities. The principal raw material received was iron in the form of plate, angles, bars, sheet and, in general, all other forms (sic). The plant was not dependent on foreign imports; iron was shipped by rail from the Petrovka Plant. Plant products were shipped via the same spur line to the Petrovka siding, from which they were shipped to their points of destination. About 20 railroad cars of raw materials were received at the plant each week and, every 15 days, a train with 50 or 60 cars transported the finished products from the plant.

5. The plant used trucks for the transport of foods, motors, and to attend to plant needs. Not a great deal of trucking was done, and trucks were often rented to other plants or to kolkhozy.

The plant kept no stockpiles because its proximity to the Petrovka Plant assured a regular supply of materials.

Water Supply

6. The plant had no water tanks; it used city water drawn from city mains

Electric Power Supply

7. Electricity came from an outside source, and was received at the above-described power house for distribution to the different sections at 220 and 380 volts. [redacted] The supply of electricity was adequate and no plan existed to increase the electric power supply. There were no work interruptions because of electricity cut-offs because the plant generator supplied emergency power.

Transport

8. Railroad. A single railroad track entered the plant, linking it with

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the Petrovka Plant; within the plant, this track was supplemented (1) by four auxiliary lines that served the open-air storage area (No.26) and (2) by other lines serving various shops, shown on sketch No. 1. No plan existed for the improvement of this transport system , which was considered adequate for plant needs. There were no freight platforms; the train was loaded directly from , and unloaded to, the auxiliary cars. Because of their volume, almost all plant products were transported by rail.

9. Highway. The plant used the main highway to Dneprodzerzhinsk; within the city of Dnepropetrovsk, this highway was called Budennovskiy Street; the main façade of the plant was on this street. The Dneprodzerzhinsk highway was asphalted and in excellent condition; it was about ten meters wide, and was open to traffic throughout the year. The highway was considered adequate.

Storage

10. The principal plant storage area is shown on sketch No. 1; because of the nature of the materials stored, this area was unsheltered. Only a working supply of materials was stored, with no effort made to stockpile. Materials were supplied to the different sections according to their needs. The proximity of the Petrovka Plant guaranteed a steady supply of materials. Plant products were not stored because they were produced only to fill specific orders.

Production Figures

11. Section No. 2 produced an average of two blast furnaces monthly. Section No. 4 produced an average of about ten excavating machines monthly.

No production figures can be given for section No. 3, which produced bridges, because the bridges varied in length and importance and were shipped unassembled, which kept workers from knowing when work on one bridge was finished and work on the following begun. 25X1

Workers were not pressured to increase production nor was it considered necessary to do so in order to maintain normal production.

Working Conditions

12. The plant worked a six-day week with two shifts daily, the first from 0700 hours to 1500 hours, the second from 1500 hours to 2300 hours; 25X1

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during each shift, the workers were given one hour to eat. About 3,000 employees worked on each shift; workers were not paid for Sundays because that day was a holiday and they did not work. Workers not engaged in heavy labor received 15 working days vacation each year. Office workers and workers engaged in heavy labor (electfodes, blast furnaces, riveting, etc.,) received one month vacation. The vacation could be spent at home or in either of the two rest homes belonging to the plant; these rest homes were located on the Krasnopolye highway, and the cost of staying at them was paid half by the worker and half by the labor union.

The average wage for a worker was 900 rubles monthly, but a specialized piceworker could earn 1,000 rubles monthly, a large enough amount for a member of the laboring class to live on.

13. The infirmary (No. 7), already described, took care of the workers' health. Health examinations were given periodically, and the nurses visited the various shops on occasion to inoculate the workers against diseases. Workers engaged in heavy labor or in labor injurious to health received a free half-liter of milk with each meal every day besides a special supply of butter , pork sausage, cheese, and other concentrated food products every 15 days. Fruit and vegetables, received as described as payment for plant trucks lent to kolkhozy, were sold at a very low price to all workers, but they were sold to workers engaged in labor injurious to health at a much lower price.

Plant Security

14. No extreme security measures were taken at the plant. There were 15 guards drawn from the least physically able of the workers; these guards watched the entrances, one man to an entrance; there were no guards within the plant, and dogs were not used at night to guard the walls; the walls had no watchtowers, and, except for the chief of the guard, the guards were not uniformed. Except for the chief of the guard and the guard at the railroad entrance (No.25). who wore a pistol, the guards were not armed. A pass was required to enter the plant, but this rule was not strictly enforced, and workers known to the guard could enter without showing the pass. Non-plant personnel were given a pass upon showing reason for a visit; this pass was granted by the chief of the personnel section.

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Once within the plant, the visitor was not limited as to time or places he might visit; all sections could be freely entered.

15. The fire fighting equipment has already been described; each section had three or four specialized workers, who, without neglecting their everyday work, took charge of fire extinguishers, fire hoses, boxes of sand, etc., complementing and serving as liason with the firehouse; these workers were called " inspectors of safety techniques", and also attended to the personal safety of the worker, warning any worker who exposed himself to accident by, for example, using a hammer in a dangerous fashion, operating a lathe without protective glasses or without having rolled up his shirt sleeves, etc. These workers enjoyed no special privileges or material gain for their activities as inspectors, but were usually enthusiasts who had received special instruction in this work.

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Organization of Personnel

16. The attached plant organizational plan (attachment No. 3) shows plant management personnel. Sketch No. 4 is the organizational plan of the electric shop management

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The plant director was named Popov (fnu)

The chief engineer was named Zaigev (fnu).

The budget director was named Kusmin (fnu)

The chief of the labor union was a woman named Vranskaya (fnu)

The Party chief was named Koralkov (fnu)

Neither prisoners nor convicts worked at the plant.

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17. About 60 Stakhanovite workers were distributed throughout the different sections; these workers enjoyed certain economic privileges. Strikes were unknown, and there were no serious complaints. Most work was piecework. First offenses were corrected with an admonition; a repetition brought expulsion. Workers arriving late were obliged to produce the same amount of work during the day as they would normally produce arriving on time.

Deficiencies, Improvements, Stimulation of Production

18. No efforts were made to increase production since the plant exceeded its yearly plans by 15 percent. The plant had yearly plans although later the plant came under the five-year plan. The plant won the collective decoration " Order of the Red Flag " in 1953, 1954 and 1955, then lost it to the Profinterna Plant, which produced railroad switches, switch rails and signals. The Order of the Red Flag was granted by the Ministry of Work to those plants exceeding their production plans. An " Order" existed for each of the trades in the city; these Orders were used to foment competition within each trade.

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The plant was not enlarged and production was not increased. No plan existed to enlarge the plant because no more buildings could be constructed within the plant area and no more buildings were needed. The plant operated at capacity production. Because of the nature of its work, the plant could easily be converted to war industry producing steelwork in large volume; the only possible difficulty would be the fact that raw materials were shipped to the plant on a single-one-track railroad, which might constitute a bottleneck. Nevertheless, its distance from the main line (about 700 or 800 meters) would permit the rapid construction of a double track which would make raw materials more readily available.

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Legend of sketch No. 1, the Molotov Metallurgical Plant

1. Lathe shop in which plant machinery was repaired and tools produced.
2. Electric power house.
3. Open-air log-storage area.
4. Gymnasium.
5. Trade school.
6. Dining room.
7. Infirmary.
8. Nail shop.
9. Electrodes shop.
10. Tool, clothing, and footwear storehouse for workers.
11. Section No. 4, producing excavating machinery, cranes, and steelwork.
12. Section No. 3, producing bridges.
13. Section No. 2.
14. Section No. 1, the riveting shop.
15. Motor winding shop.
16. Electrical fitting shop.
17. Office building.
18. Showers and dressing room.
19. Heating plant.
20. Garage.
21. Firehouse.
22. Vegetable storage sheds.
23. Personnel entrances.
24. Vehicular entrance leading to plant highway.
25. Railroad entrance.

25bis. Non-ferrous metals storehouse.

26. Sheet metal and sections open-air storage.
27. Carpentry shop.
28. Main shop building.
29. Section No. 5. Paint shop.

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Legend of Sketch No. 2, the office building designated as No. 17 on sketch No. 1.

1. Stairways.
2. Corridors.
3. Energetics chief (sic).
4. Draftsmen.
5. Photography shop.
6. Technical library.
7. Copying machine for maps.
8. Secretary of the Party chief.
9. Party chief.
10. Bathroom and dressing rooms.
11. Draftsmen.
12. Sports activities.
13. Central library.
14. Secretary of the chief engineer.
15. Chief engineer.
16. Secretary of the Director.
17. Director.
18. Draftsmen, builders, designers.
19. Draftsmen, builders, designers.
20. Draftsmen, builders, designers.
21. Draftsmen, builders, designers.
22. Chief of section No. 1.
23. Chief of section No. 2.
24. Chief of section No. 3.
25. Chief of section No. 4.
26. Chief of section No. 5.
27. Chief of the garage.
28. Chief of storage.
29. Telephone exchange.
30. Offices of the electric shop.
31. Street entrance, covered by upper stories.
32. Office of the lathe shop.
33. Offices of section No. 1.

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34. Offices of section No. 2.
35. Offices of section No. 3.
36. Offices of section No. 4.
37. Offices of section No. 5.
38. Chief of personnel.
38bis. Offices of the garage.
39. Main entrance and vestibule, covered by upper stories.
40. Komsomol.
41. Cashier.
42. Budget chief.
43. Deputies to the budget chief.
44. Budget offices.
45. Control (not further identified).
46. Chief of the plant offices.
47. General secretariat.
48. General offices.
49. Guards.
50. Chief of the labor union.
51. Printing shop for plant newspaper.

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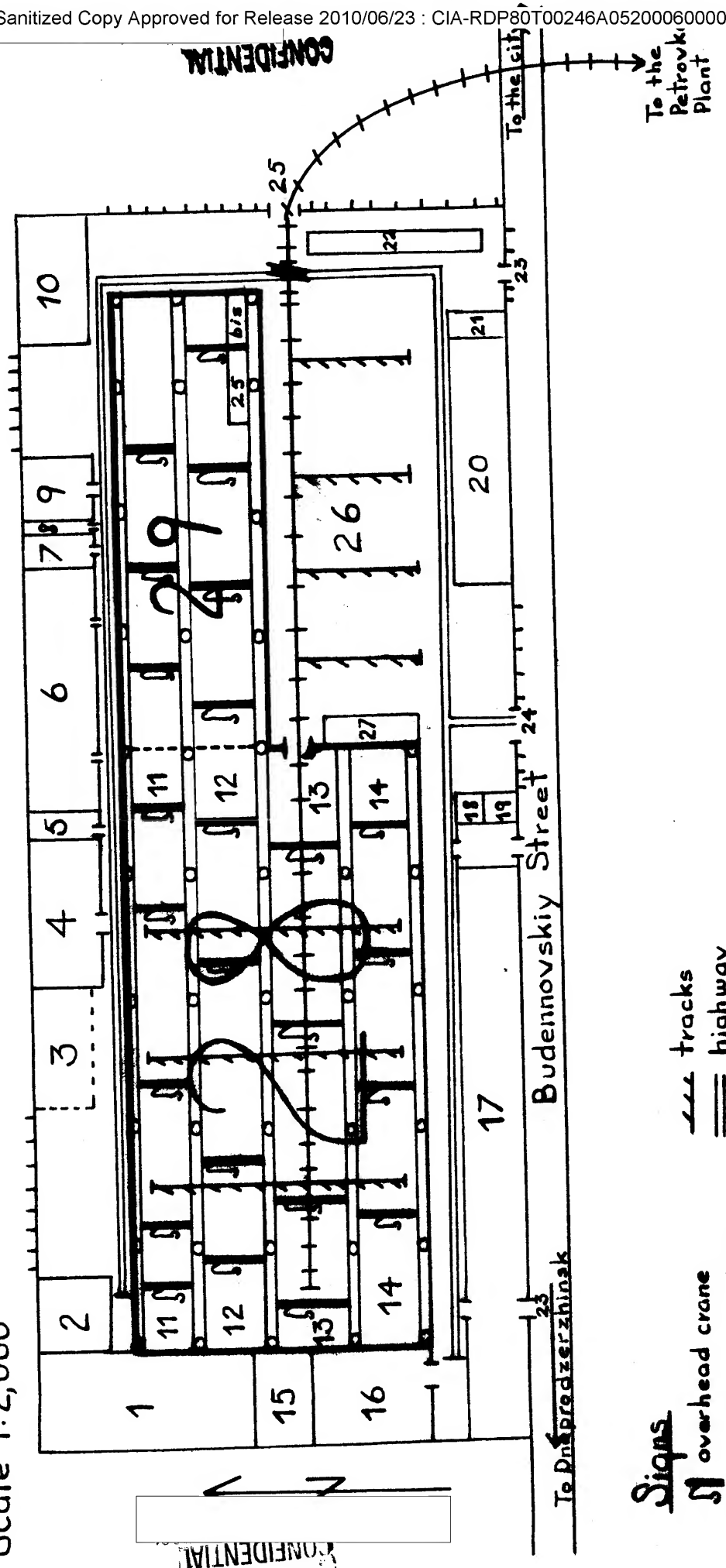
Sketch No. 1

The Molotov Metallurgical Plant in Dnepropetrovsk

Scale 1:2,000



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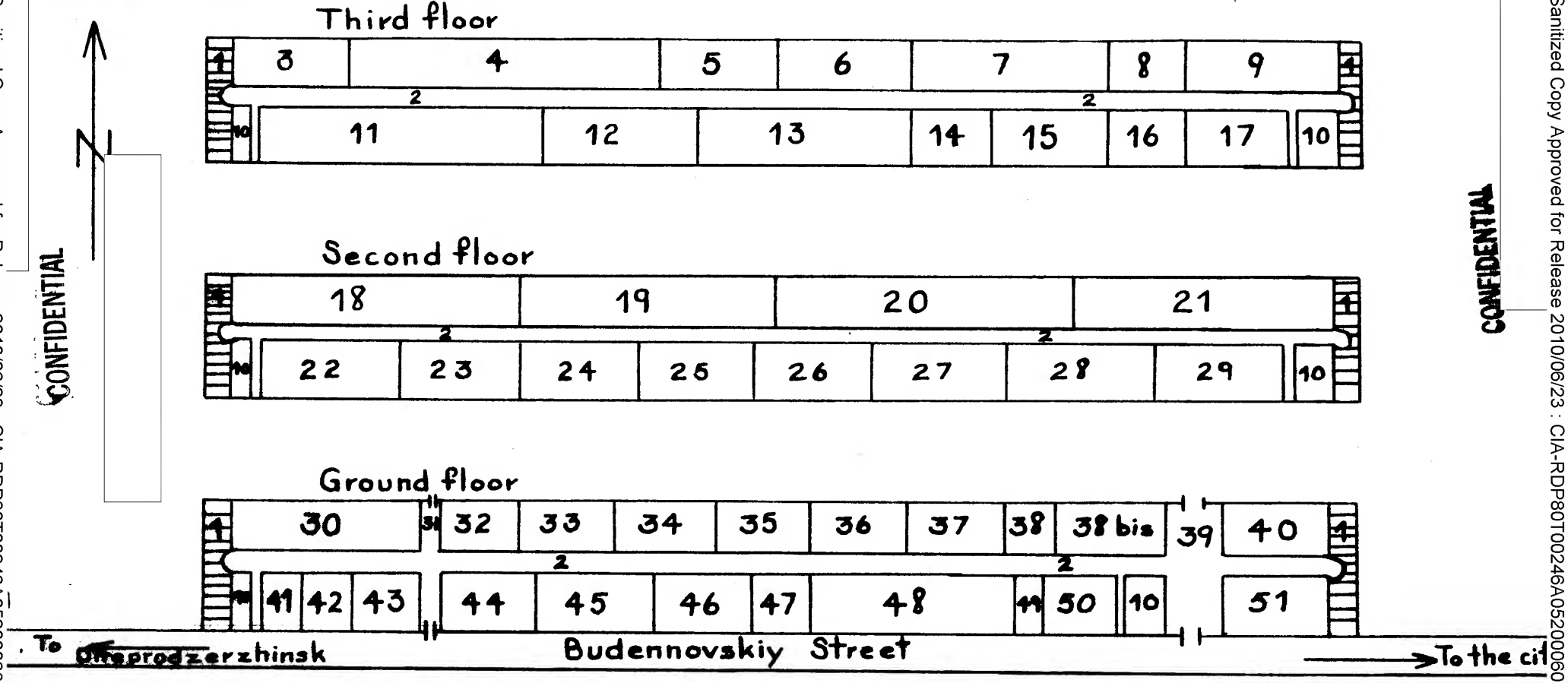
Sketch No. 2

Floor Plans of the Office Building Designated as Point No. 17 on Sketch No. 1.

Scale 1:1,000



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Sketch No. 3

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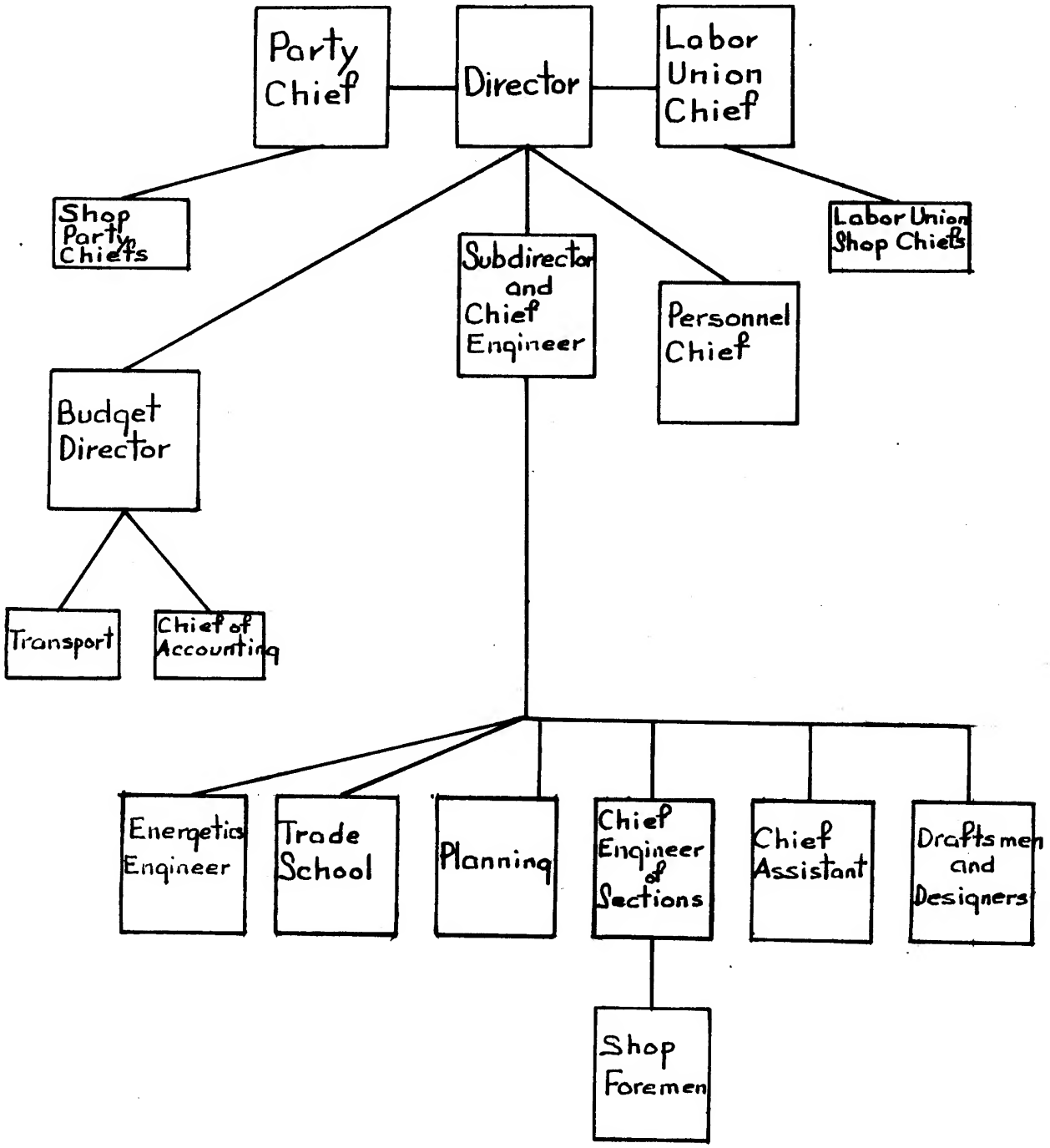
Organizational plan of plant management.



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Sketch No. 4

Orqanizational plan of the electrical section management.

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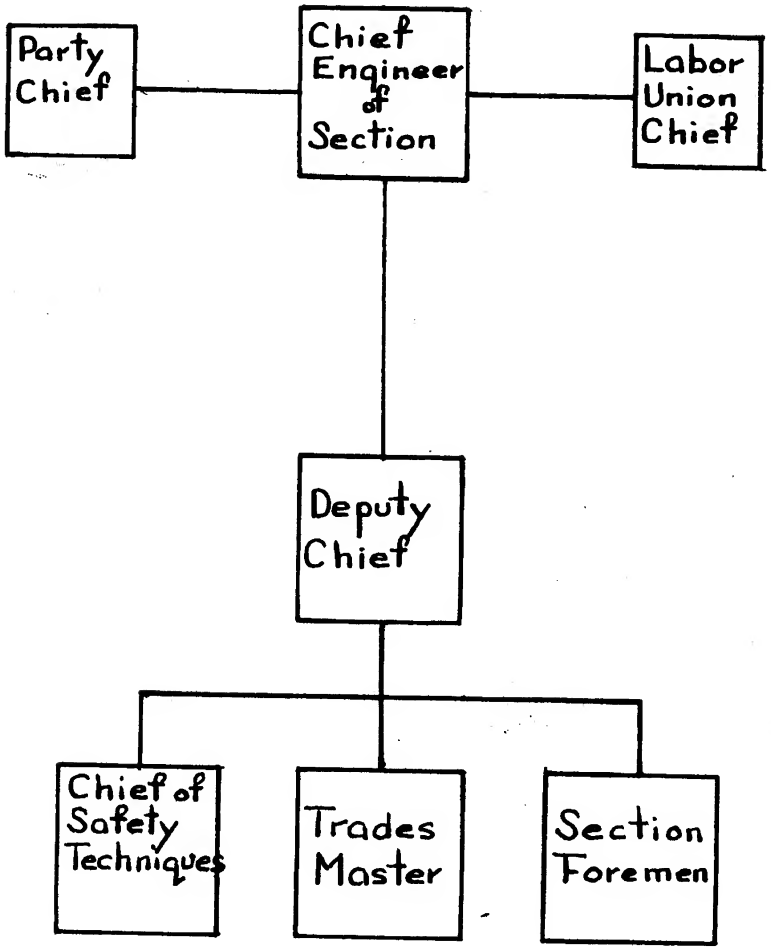

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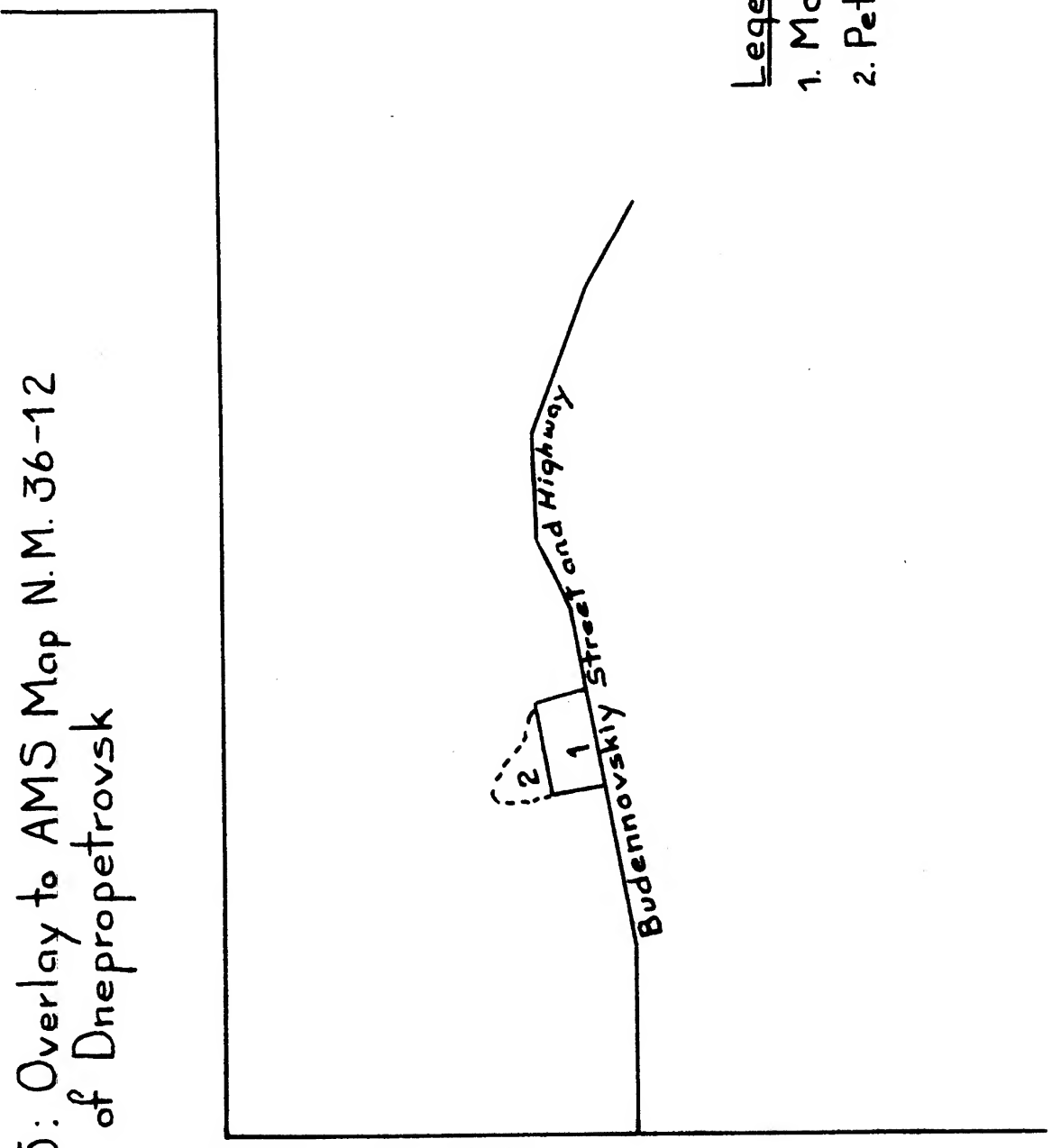
No. 5: Overlay to AMS Map N.M. 36-12
City of Dnepropetrovsk



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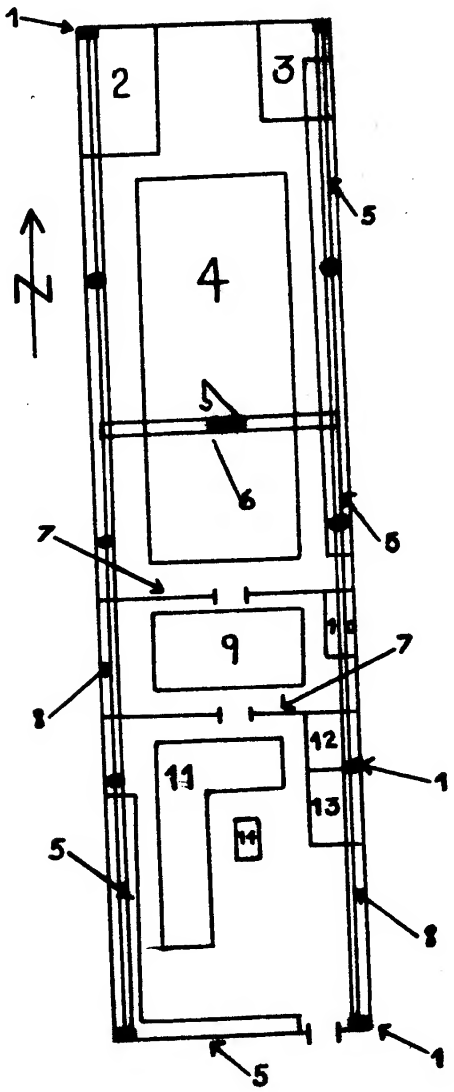
Sketch No. 6

Electrical Section of the Molotov Plant (Nos. 1, 15, and 16 on Sketch No. 1.)

Scale 1:1,000



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The plant was subordinate to the Ministry of Aviation Industry.

the plant was in the Sokolinnaya Gora area facing Meyerovskiy Proyezd.

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Plant Layout

3. Refer to page 26, [redacted] sketch of Plant 45. The following legend identifies numerical designations.

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Point 1: Gate for Plant Railroad line.

Point 2: Single track, standard soviet width railroad line which serviced Plant 45.

Point 3. Shop 69. This was a one story, gray brick building, about 25 m x 25 m in area dimension, with a sawtooth skylight roof. Stairs led to a small balcony containing offices for the Shop Chief, Timekeeper, bookkeeping, etc. It housed Shop 69, which was in charge of maintenance of the shops (Repair of windows, roofing, walls, stucco, floors, plumbing, etc.)

Point 4. Shop 10. This was a one story, gray stucco or brick building, about 100 m x 50 m in area dimension, with a sawtooth skylight roof. Stairs led to a small balcony containing offices for the shop chief, bookkeeping, etc. This building contained several other shops besides Shop 10 [redacted]

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[redacted]

Shop No. 10 occupied an area of about 25 x 25m, and had machinists benches and long assembly stands. [redacted]

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[redacted]

Point 5. Roads. The roads inside the plant were asphalt paved, in good condition, about 5 m wide, and had a sidewalk, about 1 m wide, on the side.

Point 6. Foremens' school. This was a one story, gray stucco building about 15 m x 5m in area dimension. It contained 3 classrooms and an office.

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(See description below in paragraph 12)

Point 7. Shops. There were many (five to ten) various size shop buildings in this area.

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Point 8. Engine testing area. there was nothing visible in this area, but there must have been underground testing stands for jet engines, because on

25X1

could hear the typical jet engine roar, which was audible in intervals, and lasted 2 - 3 minutes each time.

25X1

Point 9. Storage area. This was an outdoor storage area for lumber. There usually were 2 - 3 stacks of boards. The boards were about 2-1/2 m long, 20 cm wide, 3 cm thick. The stacks were about 3 m in height. these boards were used to make boxes for crating the engines produced in the plant.

25X1

25X1

[redacted]

Point 10. Administration buidling. This was a three story, gray brick building, about 60 m x 30 m in area dimension, containing the offices of the Plant Director on the second floor. The other floors had various offices for engineers, draftsmen, book-keeping, etc.

Point 11. Shop 47. This was a one story gray brick building about 100 m x 50 m in area dimension, with a sawtooth skylight roof. Stairs led to a small balcony floor containing offices for the shop manager ~~Chief~~, Dispatcher, instrument storage area and timekeeping offices of the various shops in this building.

This building contained shop No. 47 and several other shops [redacted] 25X1

[redacted]

Shop 47 occupied an area of about 20 m x 20 m, and had one drilling, one milling, one grinding-polishing machine, six ~~or~~ 7 eight lathes and four to six machinist benches. All machines were old, Soviet make machines and were used to teach apprentices their future specialty. [redacted] Shop 47 was dismantled in about 1950. 25X1

[redacted]

Point 12. Shop 17. This was a one story, gray stucco building about 150 m x 30 m in area dimension with a sawtooth skylight roof. Inside stairs led on both sides of the building to small

CONFIDENTIAL [redacted]

balcony floors. See pages 9-14 and paragraph 5 below for details on Shop 17. 25X1

Point 13. Foundry. This was a one story, gray stucco building about 50 m x 25 M in area dimension. 25X1

Point 14. Unknown Shop. This was a one story gray stucco building 200 m or more in length about 25 m wide, with a sawtooth skylight roof. 25X1

Point 15. Fence. This was a wooden fence, 3 m in height, topped with barbed wire. the wooden fence was only on the side facing Meyervskiy Proyezd, and the NORTH side. The rest of the plant was fenced off with a brick wall. 25X1

Point 16. Guard Tower. This was a square wooden tower, about 2 m higher than the fence, 3 - 4 m square. 25X1

Point 17. Bulletin Board. This bulletin board had a copy of the plant newspaper and the names of Stakhanovite workers.

Point 18. Entrance. This was an entrance for workers only, and had 5 - 8 gates. Each gate had a turnstile, controlled by a woman guard in a booth. ~~The guard issued the plant passes to incoming personnel, and collected the passes of outgoing personnel.~~

Point 19. Garage. This was a one story, gray stucco building, about 60 m x 25 m in area dimension. 25X1

25X1

Point 20. Personnel Section. This was a three story gray stucco building, about 20m x 20 m in area dimension. All newly hired personnel were photographed here for plant passes, and processed on the first floor. There were also on the first floor an office for the Chief of the Guards and alert rooms for guards. The other floors had personnel offices (Leave, pay, military reserve status, work-books, individual records, etc.)

Point 21. Main entrance. This was the main entrance, and had 9 or 10 gates, ~~controlled the same ways as already described about in point 10.~~

Point 22. Vehicle gate. This was a gate, about 4 m wide, for trucks and passenger cars. One or two male guards checked the vehicles and passengers.

Point 23. Club. This was a four story, beige brick building, about 40 m x 25m in area dimension, with a red tiled roof. The first floor had hospital rooms, where sick personnel could remain overnight or undergo treatments lasting one or two weeks.

The second floor contained offices for the Communist Party organizers and the Union representatives (Profsoyuz).

The third floor had large meeting rooms. The fourth floor had clubrooms, and rooms for various groups, such as: choir, theatre group, chess group, etc.

Point 24. Meyerovskiy Proyezd. This was an asphalt paved street, about 15 m wide, with two tracks for trolley line 34. 25X1

Point 25. Restaurant. This was a three story gray stucco building, about 50 m x 30 m in area dimension. Each floor had a kitchen, a buffet (snakkbar) and several dining rooms - capacity unknown.

Point 26. Trolley Shop.

Point 27. Polyklinik. This was a six story gray stucco building about 50 m x 25m in area dimension. The first floor contained dental, eye, ear and throat, x-ray, internal, surgical, neurasthenic departments, as well as a laboratory for blood and excretions. The polyclinic staff worked in two shifts, and was open from 0800 to 2000 hours.

The other floors contained apartments for Plant 45 employees.

Point 28. Trolley shop.

Point 29. Trade School. This was a four story gray stucco building, about 30 m x 20 m in area dimension. Boys and girls, 14 to 16 years of age were housed and fed in this building, and were provided with a dark blue uniform. They were taught the trades of machinists, mechanics and lathe operators in a two year course. As their training, housing, food and uniform were provided free by Plant 45, these apprentices were obligated to work for at least one year in Plant 45 upon completion of the

25X1

[redacted] 25X1

trade school.

[redacted] this trade school was transferred in 1954 or 1955 to an unknown location on Izmaylovskiy Bulvar, Stalinskiy Rayon, MOSCOW, and the building was converted into apartments for plant employees.

Shop 17 Layout

5. Refer to page 27 [redacted] sketch of the first floor of Shop 17. The following legend identifies numerical designations: 25X1

Point 1. Storage area. This was an area about 5 m x 5 m which served as a storage area for metals for Group 1 (presses).

Point 2. Storage area. This was an area about 10 m x 5 m. Dies, moulds, measuring instruments, tools, nuts and bolts were stored here.

Point 3. Dispatcher's office. This was an area of about 5m x 5 m.

Point 4. Work area of Group 7. This was an area about 10 x 5 m where Group 7 worked on maintenance and repair of the presses and furnaces in Shop 17. The area contained one drilling machine, one lathe, both old, Soviet made machines, and several machinist benches. Group No. 7 had about 20 men and worked one shift only.

Point 5. Entrance. There were two entrances. Each entrance consisted of a wooden door, about 3 m wide.

[redacted] 25X1

30 m long,

Point 6. Corridor. This was a corridor about/4 m wide. Electro cars with metals and finished parts used this corridor. 25X1

Point 7. Work area of Group No. 1. This was an area about 40m x 20m, where Group No. 1 worked on presses. There were 15 presses there in three rows of five each, each press about 4m long and 2m wide. One press, the largest, was of [redacted] make, 25X1
type [redacted], the others were smaller, fairly new Soviet 25X1
made presses. The distance between presses was about 3 meters, and was wide enough to permit the electro cars to drive up to the presses. There was also a forklift crane. There were 3 men to each press. Group No. 1 worked 3 shifts, employing about 50 men on each shift.

Point 8. Work area of Group No. 6. This was an area about 10 x 10 m in size, where group No. 6 worked on repair of milling, drilling, grinding machines and on repair of lathes. The area contained one milling, one planing machine, three lathes and several machinist benches. The machines were old, Soviet made machines. Group No. 6 worked one shift only, and consisted of about 20 mechnics.

Point 9. Work area of Group No. 4. This was an area of about 50 m x 10m, where Group No. 4 (thermical group) worked. There were three thermical furnanes, Soviet made, type unknown, each about 3 m long, 2 m, wide, 1.70 m in height. The parts from the

[redacted]

furnaces were laid out on the floor to cool, and later taken to Point 10 to be cleansed in tubs. Two or three men worked on one furnace. Group No. 4 worked two shifts, employing about 20 men on each shift. 25X1

Point 10. Tubs. This was an area about 20 m x 5 m containing four tubs, about 2 m wide, 1-1/2 m long, 1 m deep, where the forged parts made by the thermical group were cleansed.

Point 11. Work area of Group 5. This was an area of about 20 m x 20 m, where Group No. 5 made knives, forks and spoons. This area contained one press, polisher's stands and machinist benches. This group worked two shifts, about 30 men on each shift.

Point 12. Work area of Group 3. This was an area about 50 m x 15 m where Group No. 3 made various small component parts for jet engines. This area contained about 10 lathes, 6 - 7 drilling machines, several milling and grinding/polishing machines. The lathes were of Soviet and German make, whereas all other machines were Soviet made machines, not new, but in good condition. This group worked two shifts, employing about 50 men on each shift.

Point 13. Work area of Group 2. This was an area about 50 x 15 m, where Group No. 2 made various component parts for jet engines.

[redacted] See paras 7 and 14 below for description, and pages 29 and 31 for [redacted] sketch of these parts. [redacted] 25X1 25X1

25X1

The area contained 10 lathes, six drilling machines, two milling and two polishing-grinding machines.

One lathe was of Swiss manufacture (type unknown to source), and two lathes were new "Dip 200". The "Dip 200" were manufactured in Moscow, in the Krasnyy Proletariat Plant and were according to hearsay, copies of the [redacted] Lathe type [redacted] 25X1 25X1

The other lathes and other machinery were all older models, Soviet made machines, all in good condition.

The lathes were about 2m long, 0,80 m wide, and were placed in rows with an interval of 2 m to 3 meters of 3m between lathes. Electrocars could move through these intervals.

This group worked in 2 shifts, employing about 50 men to each shift.

Point 14. Polisher's Section. This was a separate, walled off area for polishers, of about 8 m x 8 m. [redacted] 25X1

Point 15. Storage area for Group No. 3. This was an area about 15 m x 15m.

Point 16. Storage area for Group No. 2. This was an area about 15 m x 15 m.

Point 17. Entrances. There were two wooden doors, each about 3 m wide. These entrances usually were shut, and only opened for electrocars.

Point 18. Corridor. This was a corridor, about 30 m x 3 m.

25X1

[redacted] CONFIDENTIAL [redacted]

25X1

Point 19. Toilets.

Point 20. Shower rooms.

Point 21. Storage area. This was an open area, about 15 m x 5 m, not used at times and at times iron or steel were piled up there.

[redacted] there were no welding machines in Shop 17. 25X1

Layout of the Balcony

6. Refer to page 28 [redacted] sketch of the layout of the balconies (one on each side) 25X1
of Shop No. 17. The following legends identifies the numerical designation:

Point 1. Dressing rooms. This was an area about 75 m x 5 m.

Point 2. Safety Office. This was an area about 25 m x 5 m, containing offices charged with preventing plant accidents, safety measures for employees, etc.

Point 3. Offices. This was an area about 50 m x 5, containing offices for the engineers, technologists, draftsmen.

Point 4. Bookkeeping offices. This was an area about 30 m x 5 m.

Point 5. Shop Managers office. This was an area about 10 m x 5 m.

Point 6. Assistant Shop Manager's office. This was an area about 10 m x 5 m.

Point 7. [redacted] Offices This was an area about 10 m x 5 m.

Point 8. Payroll and timekeeping offices. This was an area about 40 m x 5 m.

[redacted] [redacted] 25X1

[redacted]

Point 9. Recreation area. This was an area about 50 m x 5 m, called Krasnyy Ugolok (Red Corner). This area had a first aid room, lounges, tables for chess and a library-reading room. 25X1

25X1

Production

7. [redacted] December 1944 the plant produced Aviation Engines for Douglas ~~Transportation~~ TYPE Aircraft. These engines were 8 cylinder, propeller driven, mazut fueled engines called "ATsA" ALLA and were for passenger planes of the AEROFLOT Civilian Air Line. At the end of 1946, the plant stopped this production and converted to the manufacture of motors for ten ton trucks. However, the plant could not produce satisfactory motors. [redacted] 25X1

[redacted] the foundry could not cast the proper block. 25X1

[redacted] the motor was a copy of an [redacted] motor, and the original [redacted] motor had some defect, and this prevented the manufacture of an acceptable truck engine. 25X1

[redacted] Plant 45 ~~experimented~~ experimented over a year on the production of motors for ten-ton trucks, but did not produce any motors. 25X1

~~In 1948 the plant started to produce jet engines (type unknown to [redacted])~~

[redacted] there was no change in personnel strength at any time during the time he worked at the plant. 25X1

CONFIDENTIAL [redacted]

[redacted] 25X1

During the period when the plant switched from Douglas engines to the ten ton truck motors, during the period of unsuccessful and unproductive experimentation with the ten ton truck motors and during the conversion to jet engines, the same number of workers were employed at the plant. This was so mainly because the plant direction was afraid that if they would dismiss workers, these workers would find employment elsewhere, and Plant 45 would later suffer from a shortage of experienced personnel. During the change-over periods, many workers were kept busy at various make-shift and temporary jobs, such as dismantling and overhauling all machinery, painting and repairing the shop buildings, working on canaliqation, digging ditches for pipes, improving and paving the streets within the plant, etc. [redacted] In 1947, a new shop No. 22 was constructed, and the plant repaired various aircraft engines, and made parts for other plants. [redacted] 25X1

[redacted] plants. In 1948 the plant started to produce jet engines (type unknown).

In 1953, Plant No. 45 started to produce consumer items. Shop No. 17 made knives, forks and spoons [redacted] 25X1

Shop No. 17 also made [redacted] childrens' toy sets, [redacted] but the manufacture of these toys stopped in 1954. [redacted] 25X1

[redacted] 25X1

[redacted]

this shop was re-numbered after 1946,

~~the designation and/or production of Shop No. 10~~

~~after [redacted] 1946.~~ [redacted] there were about 200 employees,

working one shift of 10 - 11 hours [redacted]

The parts, called detali (items) are shown on pages 29 and 31.

The part shown on page 29 was of hollow steel, 2 mm thick, diameter

100 mm at the narrow part, 250 mm at the wide part, about 120 mm long, weight

about 1-1/2 kilos. [redacted] ~~The sheet had~~ 25X1

~~a number for this specific work operation, (#105) a sketch of the part, and stated~~

~~how many revolutions on the lathe (600 turns) were required, and what cutting tool he had~~

~~to use.~~ (See page 29 for [redacted] memory reproduction of the instruction 25X1

sheet). The sheet was signed by a technologist, and the lathe operation was

referred to as No. 105. [redacted] 25X1

[redacted]

~~The part at the bottom~~, where the diameter was

250 mm the part was [redacted] cut it so it would be even, cutting 25X1

off as much as 5 mm on some places. The whole operation on this part took

6 minutes. [redacted] 25X1

[redacted]

 25X1

[redacted] and the

tolerance was 0.6 (6/10) of a mm. There were no rejects and after [redacted] 25X1

finished 10 - 20 parts, they were checked by a technical control girl. She stamped them with a rubber stamp containing the letters OTK and her number. After that the parts were taken away, without wrapping, by a laborer 25X1

called Raspredelitel (distributor) who took the parts to polishers for final 25X1

work. [redacted] made 10 parts per hour, or 80 per day. The norm was 55 per day. [redacted] paid 0.30 rubles for one part, [redacted] the piece rate went up to 0.45 rubles and he received a premium besides.

[redacted] 25X1

[redacted] The operation for this part was either No. 94 or No. 96 [redacted] These parts were of hollow steel, 2mm thick, with a diameter of 50 mm at the narrow part, and 130 mm at the wide part, and 100 - ~~120~~ mm long. This part weighed 750 grams to 1 kilogram. The norm was 80 per day, but could make 120 daily. The pay was 0.40 for each, but for over fulfilling [redacted] norm, the pay went up to .80 25X1

[redacted]

[redacted] 25X1

As to Shop 17 activities, the shop received steel sheets of various sizes (average 1-1/2 m long, 1 m wide, varying in width from 2mm to 5mm). The steel was forged into desired shapes ~~in the [redacted]~~s (point 9 page 10) or stamped in the presses (point 7 page 10), and after the lathe work, were polished to specification and distributed further (to unknown shops).

Raw Materials.

8. [redacted] coal arrive in railroad cars, and mazut in fuel trucks. He noticed stacks of lumber (Point 9 page 4). Shop 17 used sulfuric acid to clean forged metal parts. The only raw material brought to Shop 17 were steel sheets, ~~1-1/2 m x 1 m, 2 mm to 5 mm thick.~~ 25X1

Power

9. The voltage in the plant was 220 volts. ~~1945 to 1950 there were frequent electric failures, lasting up to 3 hours.~~ [redacted] 25X1

Transportation

10. A standard Soviet gauge railroad track entered the plant shown as points 1 and 2 page 3. The plant had an unknown number of 215 1-1/2 ton and 3 ton trucks, and electrocars. [redacted] 25X1

Working Conditions

11. Most shops of the Plant operated two shifts, but there were also some shops or groups which operated three shifts. In Shop 17 the group working on presses operated on three shifts, the mechanics in charge of repair and maintenance worked in one shift only, and the others worked two shifts.

Up to Spring 1956, the working week consisted of 48 hours - six days, each of eight hours for the daytime shifts, and 42 hours for the night shift (six days, each of seven hours). In Spring 1956, the hours for the daytime shifts were reduced to 46 hours, namely only six hours on Saturday. The hours were:

First Shift: 0700 - 1200, 1300 to 1600 hours

Second Shift: 1600 - 2400 hours (workers usually had a quick meal around 2000 hours)

Third Shift: 2400 - 0700 hours - with a fifteen minute break around 0400 hours.

Leave was twelve working days annually for employees with less than 3 years service, fifteen working days for others. Leave was granted any time it was desired, but had to be entered in a ~~table~~ roster of individual leaves of employees in a particular group, and had to be approved by the group foreman.

[redacted] following pay scales:

Lathe operators - up to 2,500 rubles monthly

Polishers - up to 2,000 rubles monthly

Technical Control Clerk - up to 1,200 rubles monthly.

[redacted]

[redacted] 25X1

The pay of foreman, technologists, group chiefs depended very much on overall production. Their basic pay was 800 - 1200 rubles monthly, but premiums brought their pay up to 2000 - 3000 rubles monthly. Unskilled elderly cleaning women earned up to 500 rubles monthly. The shops were swept daily, and painted once a year. There was sufficient light and ventilation in the shops. Workers who had dirt-producing work were furnished with overalls, all others could work either in their ordinary clothing or could wear overalls. Each shop had its own mechanics for repair and maintenance of its machinery, and the machines, whether old or new, were always kept in good condition.

Educational and Welfare Facilities for Plant Employees

12. The plant had about fifteen dormitories (Obshchezhitiye) on Sokolinaya Gora (near the plant) and four to five five-story apartment buildings on Izmaylovskiy and Pervomayskiy Bulvars, Stalinskiy rayon. [redacted] 25X1

[redacted] Plant 45 was constructing an unknown number of apartment buildings for its personnel in the Izmaylovskiy Bulvar area. The plant had several rest and recreation homes for its employees, one about 100 km north of Moscow, and one near Yalta, in the Crimea. 25X1

All employees had to submit to an annual health check, and those who needed medical treatment, were sent free of charge to sanatoriums to be cured.

[redacted] 25X1

The plant maintained a trade school (see Point 29, Page 8) and the description in paragraph 4 above). It also had up to 1950 a special shop for apprentices (Shop No. 47, see Point 11, page 5). There were approximately 75 Russian apprentices in Shop 47 in 1947, and the shop operated two shifts. 25X1 Shop 47 was dismantled in 1950. a foreman's school operated by the plant for its personnel. Workers who wished to attend this school had to submit an application to their shop manager, and if approved, were sent to the school. There were more applicants than actually admitted to the courses. The school hours were 2 hours, three times weekly (6 hours weekly) from November up to May, about 150 hours annually. The complete training was 300 hours. The school hours were 1600 to 1800, or 1700 to 1900 hours. There was one group of about 35 - 40 students, all of whom were brigadiers (section formen), masters (senior mechanics) or mechanics of the fifth, sixth and seventh category. The instructors were engineers, technologists, foremen and shop managers of the Plant. There were also several professional teachers, on Mathematics and Chemistry. These latter teachers also taught in the Plant trade school. The subjects were 25X1

Chemistry, Algebra, geometry, general Arithmetic, Drafting Blueprints, Russian Literature and Grammar, Political Indoctrination, Manufacturing methods, metallurgy (how iron was mined, conversion into steel,etc.)

25X1

[redacted] 25X1

Measuring instruments (Micrometers, calibers, scales, gauges) Cutting instruments, General Machinery. The main emphasis was on Arthmetic and Mathematics.

Upon graduation, all students were given a diploma, and many were promoted to foremen. [redacted] 25X1 [redacted] The plant also published its own newspaper, which appeared 3 times weekly, and cost 0.10 rubles.

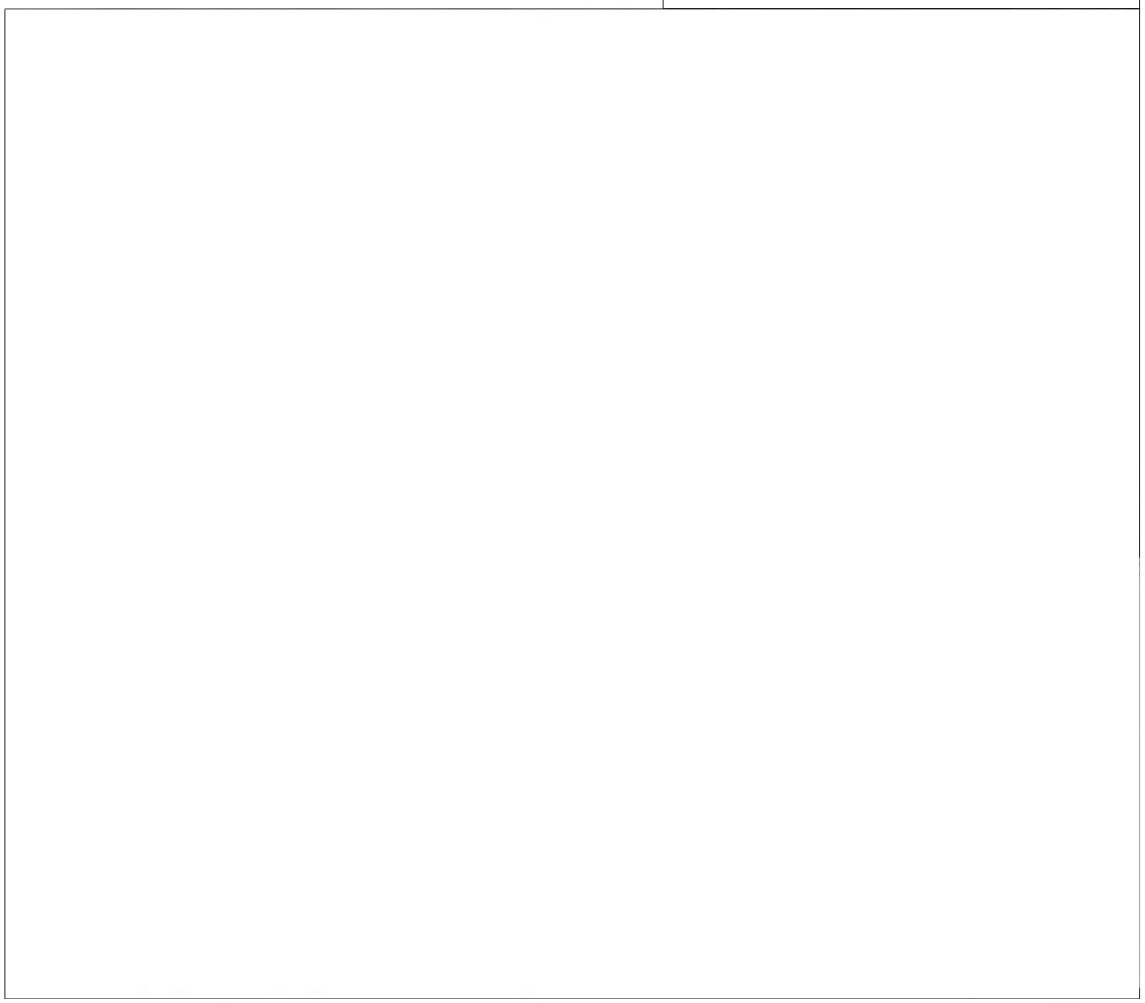
Security

13. The plant had very strict security. Upon being hired, all employees were told that the plant manufactured secret war material, and all workers were prohibited to discuss among themselves, with their families or friends details of the plant. The employees were told that any violators of the plant secrecy would be judged for anti-state activities by a court, and be punished with jail according to the Law for such offenses. Shop numbers were frequently changed, almost each year some shop received a new number. The plant had an unknown number of men and women guards, clad in a khaki uniform. The women were armed with pistols, the men had carbines. [redacted] the guards were subordinate to the plant. [redacted] 25X1 25X1 [redacted] this guard tower was not occupied by a sentry. [redacted] dogs patrolled along the fence at night.

The following pass system was employed:

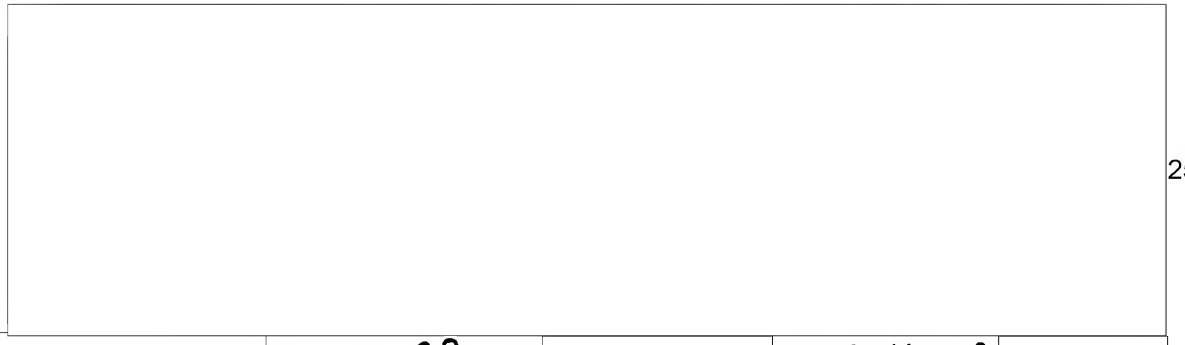
Upon being hired by the personnel section (point 20, page 7) [redacted] 25X1

[redacted]



25X1

~~his shop to the gate.~~ The pass was of cardboard (black) 20 cm x 6 cm ~~when~~ open, 10 x 6 cms when folded in half. The outside cover had no marking.



25X1

(See page 32 for reproduction of

During WW II the plant had air raid dugouts, but these shelters were covered with earth after WW II.

25X1

[redacted] no air raid drills or civil defense lectures in the plant.

There were no fires in the plant [redacted]

Organization and Personnel

14. Up to 1948, German PWs worked in the Plant. Two German PWs worked up to 1948 in Shop No. 17 (then called Shop No. 13) on lathes. [redacted]

[redacted]

Each summer the plant sent about 5 men from each shop for a period of two months to work on Kolkhozes in the Moscow Oblast. These men received their average factory pay while working on Kolkhozes. Also, 1950 to 1955, plant 45 called for volunteers to aid in the construction of apartment buildings for plant employees. Two men of Shop 17 volunteered in 1953 for such work, and received their average pay from the plant while working on construction.

[redacted] the following departments and shops:

Administration and Bookkeeping

Technical Control Section

Restaurant Section

Medical Section (Polyclinik)

Communist Party Section

Trade Union Section (Profsoyuz)

Guard's Section

Housing Section

Shops 10, 14, 15, 17, 21, 22, 23, 26, 41, 42, 44, 69.

[redacted] the plant had shops No. 1 up to 44. Many shops (such

as No. 47) were dismantled

Shop 69 was an auxiliary shop - repair and maintenance of windows, 25X1

roofs, factory buildings, etc.

25X1

about 70% were men, 30% were women.

following breakdown of Shop 17 personnel: 25X1

Total personnel, on all shifts, about 500.

Personnel:

One Manager

Two Assistant Managers (one for each shift) — The shop manager and his assistants were graduate engineers.

Three Dispatchers

Several Technologists, draftsmen

Bookkeeping and Payroll Section (about 10 girls)

Six - seven Storage Clerks

Seven Groups:

Group No. 1 (Presses) about 50 men on each of 3 shifts

Group No. 2 (Made engine component parts - His group) About 50 men on each of two shifts.

One Senior Foreman (Master)

Two foremen (one for each shift)

Eight Section Foremen (Brigadier) (four for each shift)

Eight Lathe Operators on each shift

Ten - Twelve Drilling Machine Operators on each shift.

Seven or eight Machinists on each shift.

Six or eight Polishers on each shift

Two or three electricians on each shift

[redacted] 25X1

[redacted]

Two Technical Control Clerks on each shift

Two Cleaning women on each shift

Two unskilled laborers to bring parts and take away parts on each shift.

Group No. 3 (Made Engine Component parts) Same as Group No. 2 - about 50 men on each of two shifts.

Group No. 4 - Thermical Group - about 20 men on each of two shifts.

Group No. 5 - Made consumer items, about 30 men on each of two shifts.

Group No. 6 - Repair of machinery - about 20 men on one shift only.

Group No. 7 - Repair of presses and furnaces, about 20 men on one shift only.

Personalities of Plant 45

15. KOMAROV, fnu, The Plant Director. [redacted] 25X1

16. KUYNTSEV, fnu. He was the Chief Engineer [redacted]

17. LESINSKIY, IOSIP, Manager of Shop 17. [redacted]

18. BYCHKOV, fnu, The Party Organizer of Shop 17 and also the Assistant Manager of Shop 17. [redacted] 25X1

[redacted]

19. PISAREV, fnu. Up until 1950, was Manager of Shop 47.

25X1

20. KLIMOV, fnu. The Engine Designer

Miscellaneous

21. Norm and Waste.

a. As a rule, the norm was easy to fulfill. Most workers produced about 110 - 115% of their norm

25X1

In shop 17, there was a considerable amount of spoiled parts in the presses.

25X1

b. Ceramic steel cutter.

in 1952 the plant employed ceramic glass cubes, about 1 cm x 1 cm x 1 cm, to cut steel.

25X1

c. Visitors.

In 1950 or 1951 a and delegation visited Plant 45, and were escorted through Shop 17.

25X1
25X1

In 1952 he saw a Chinese delegation being escorted through the Plant.

25X1

FROM (Agency)

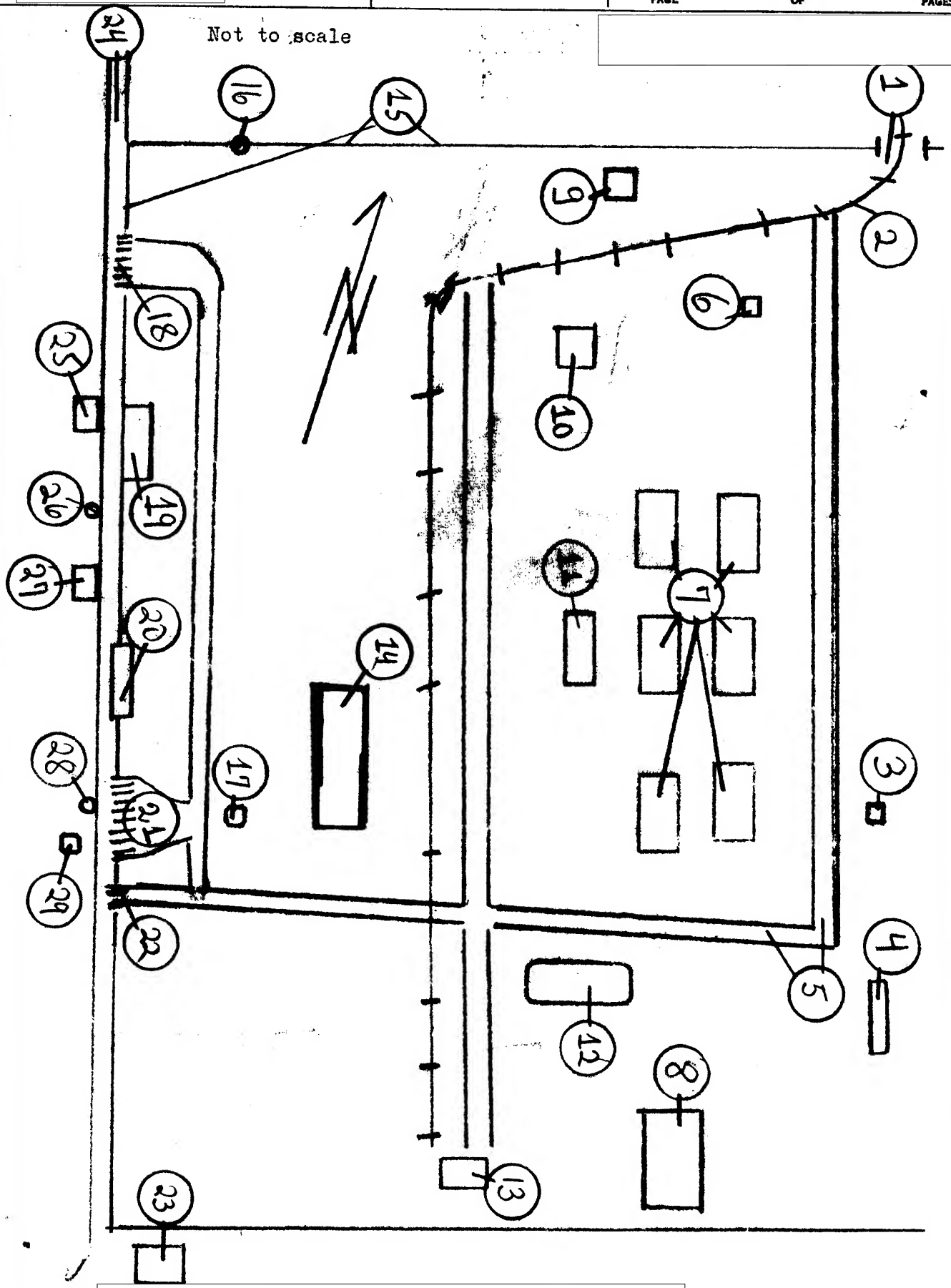
sketch of Plant 45 layout.

PAGE OF PAGES

25X1

25X1

Not to scale



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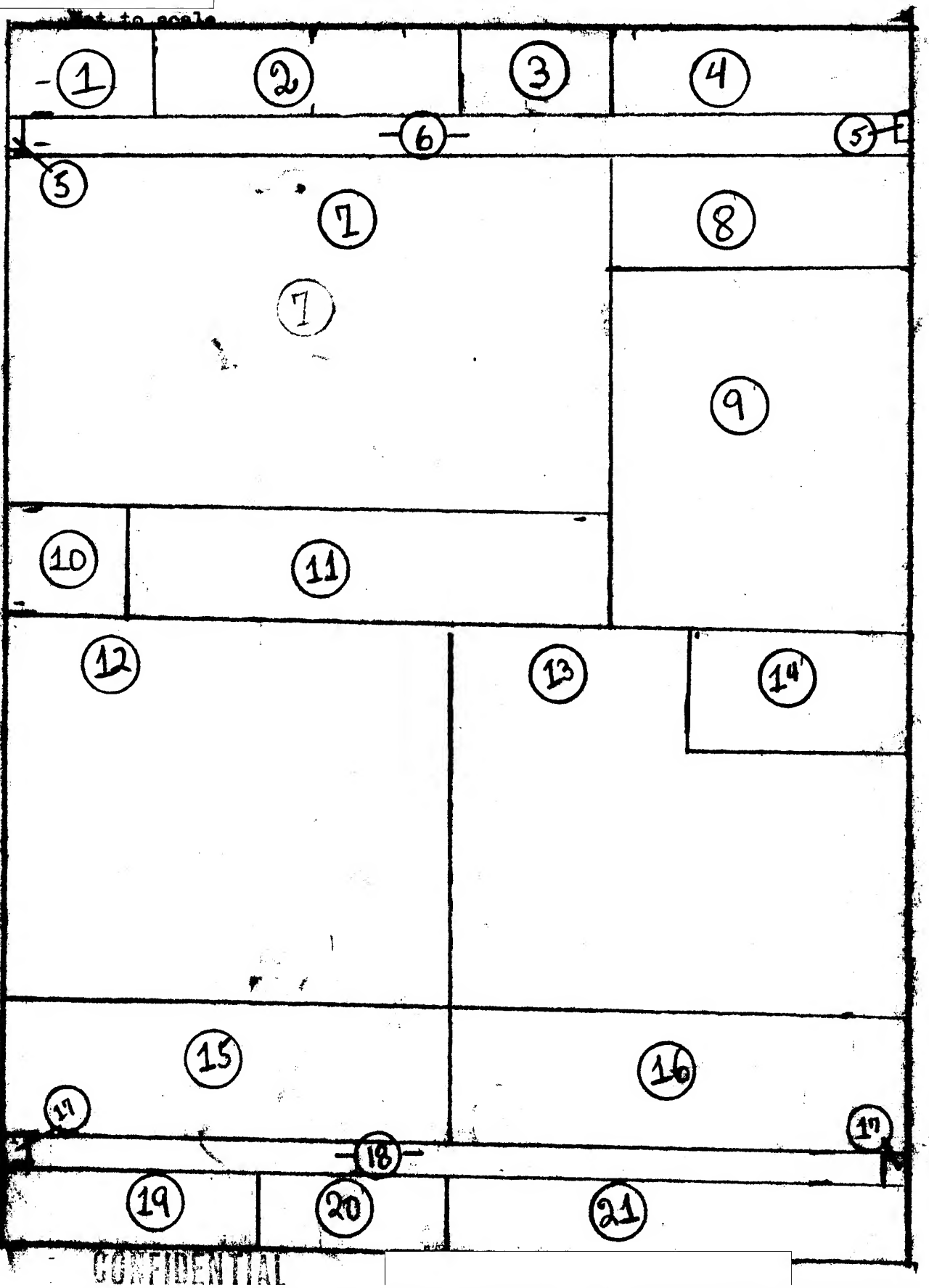
sketch of the layout of the first floor of shop 17, Plant 45



FROM (Agency)

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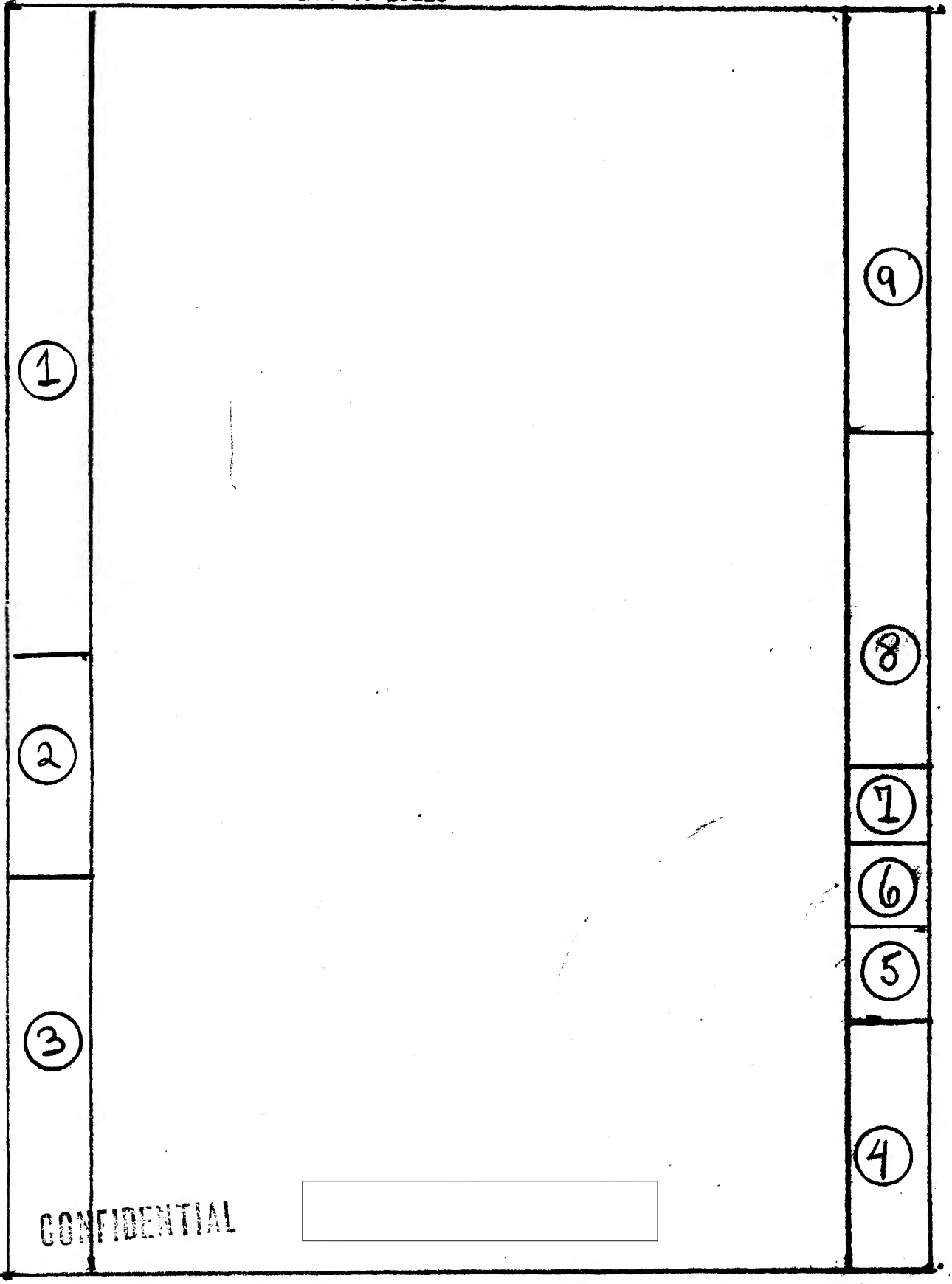
sketch of the layout of the two balconies, shop 17, Plant 45
Not to scale



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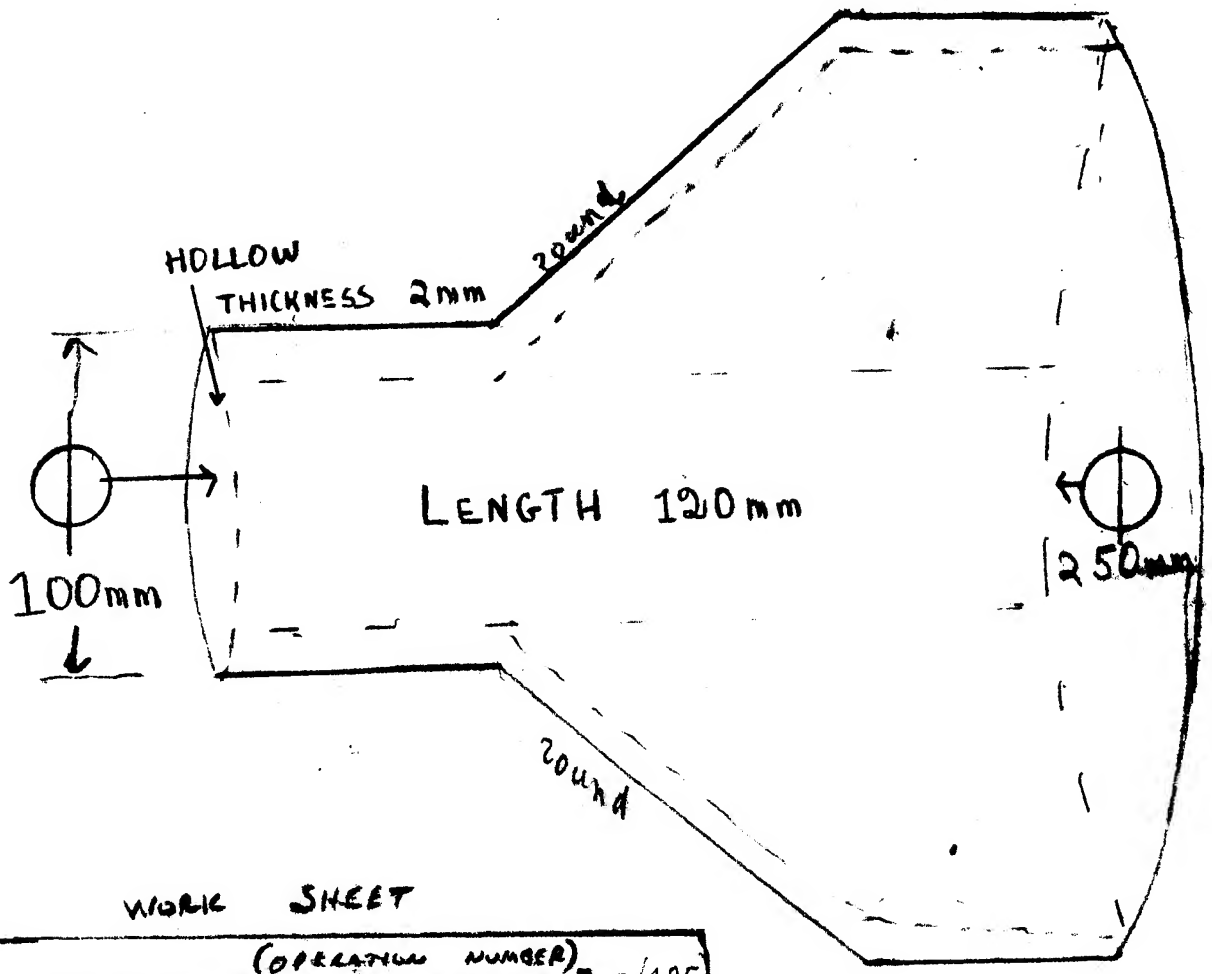
OF PAGES

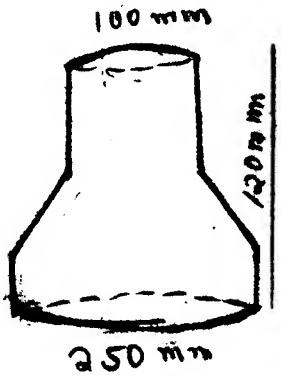
sketch of a part(operation 105) made by source in shop 17, Plant 45.



WORK SHEET

(OPERATION NUMBER)
Технический листок операций 105 (105)

Токарная обработка



Скорость станка 600 обороты (REVOLUTIONS)

Резец Из ~~XXX~~ ~~0000~~ (CUTTING TOOL)

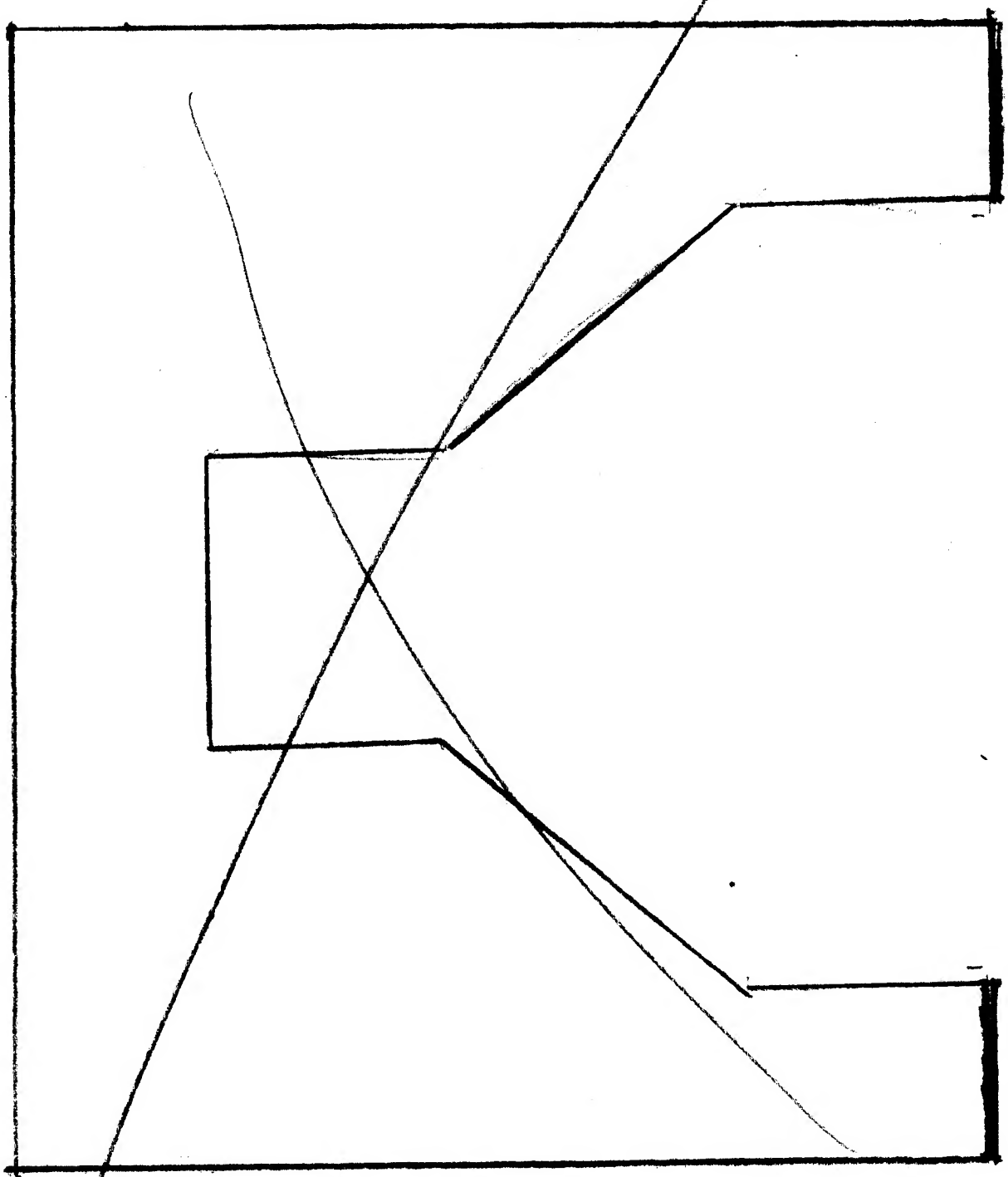
CONFIDENTIAL

Signature

25X1

OF PAGES

reproduction of a template in which the round part (operation 105) had to fit .



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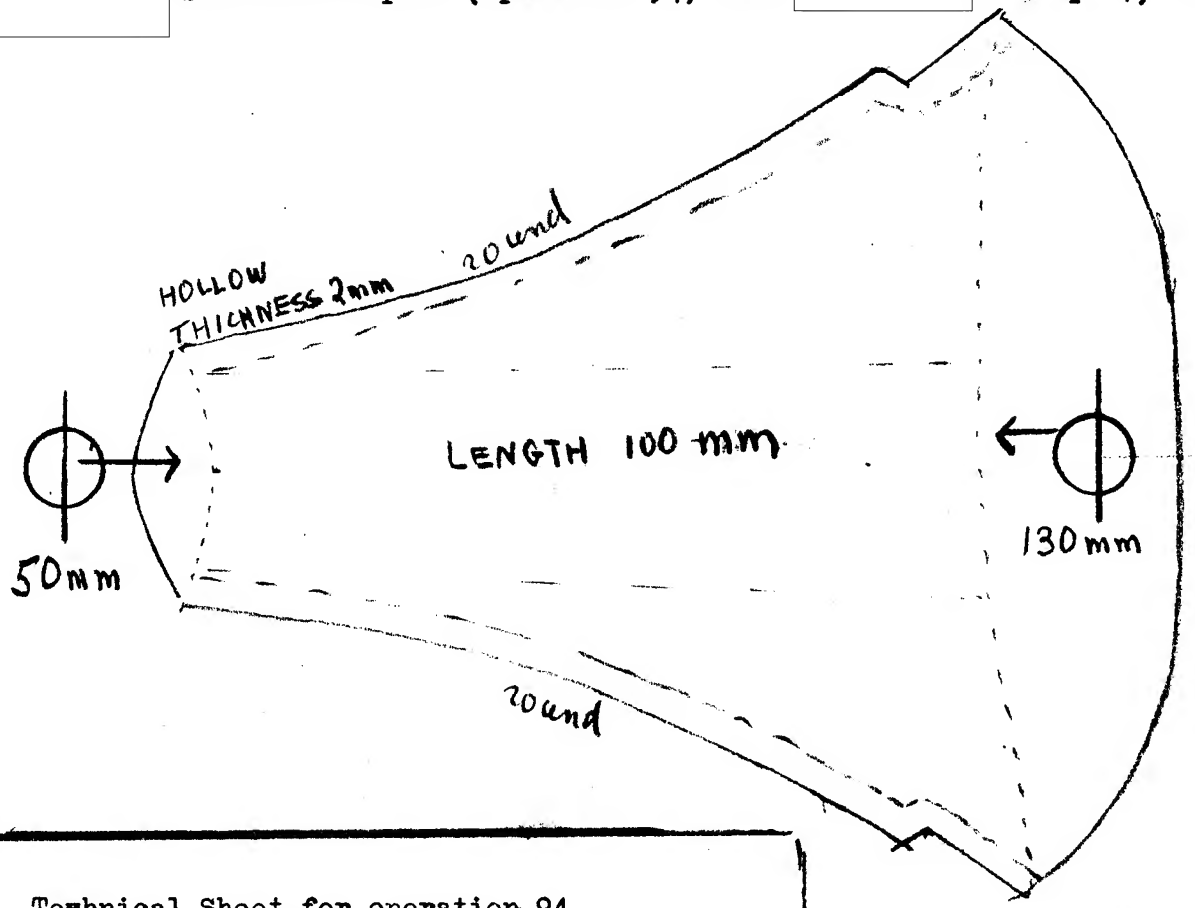
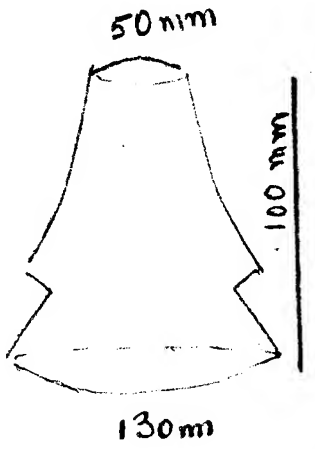
sketch of a part (operation 94) made [redacted] in shop 17, Plant 45



Technical Sheet for operation 94



Lathe work

Speed 600 turns

Cutting tool BK 3

Signature of Technologist

CONFIDENTIAL

[redacted]

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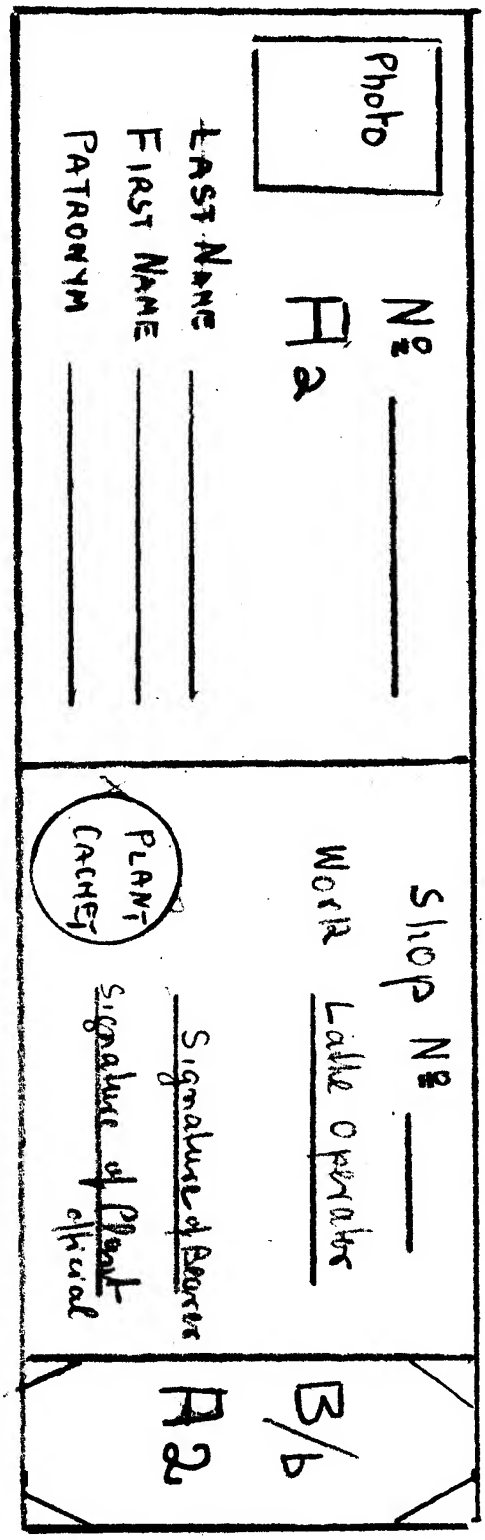
reproduction of the pass issued to workers in Plant 45



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C-O-N-F-I-D-E-N-T-I-A-L

25X1

COUNTRY: USSR (Moscow Oblast)

REPORT NO. [redacted]

SUBJECT: First Automobile Repair Plant in Moscow

DATE

25X1

DATE

PLACE ACQUIRED

DATE OF REPORT:

25X1

1. The First Automobile Repair Plant, located on Ostapovskoye shosse (number not known) in the Zhdanovsky rayon, Moscow, was subordinate to the Ministry of Automobile Transport and Highways; it was adjacent to a meat combine located near Simonovskiy B. ulitsa. It was not known by any other name, had no numerical designation, and its sole mission was to repair the GAZ AA and GAZ 51 trucks. The estimated dimensions of the plant were 110 x 120 x 100 meters. It was surrounded by a two-and-a-half-meter-high brick wall with three entrance gates (one for personnel and two for vehicles) on Ostapovskoye shosse (refer to sketch No. 1 showing layout of the plant). The main building (No. B on sketch No. 1), which housed a number of workshops, a testing laboratory, offices and a garage, occupied about half the plant area; in addition, there were other structures such as warehouses and a carpentry and an electric shop, all of which are described in legend in paragraph 5 below.

2. The plant used 220-volt current which was supplied by the Moscow city system; water was piped in via underground mains. Raw materials (gasoline, oil and grease) were transported by truck; quantity and frequency of shipments not known.

C-O-N-F-I-D-E-N-T-I-A-L

25X1

3. The plant employed an estimated 800 to 900 workers, 60 or 70 percent of whom were specialists. The employees in the engine shop (shop No. 2, building B) and the machine shop (No. 18) worked on a two-shift, eight-hour-daily schedule, whereas all others worked one eight-hour-shift per day, five days a week, and a six-hour shift on Saturdays. On the average, the plant repaired about 18 vehicles per day, which was not considered an excessive norm; the maximum attainable was 20. The plant operated under a handicap because of its defective, manually-operated machinery and, for this reason, did not think it could be converted 25X1 to war production. There were no restricted areas or shops in the plant. About five or six unarmed guards were on duty during the day and the guard unit may, possibly, have been reinforced at night. Although all employees had passes bearing their photographs, they rarely had to show them to the guards since the latter knew most of the workers. 25X1 all shops were equipped with sand boxes and fire extinguishers; 25X1 Laborers' wages averaged 700 to 750 rubles a month. Personnel, such as shop chiefs, technicians and mechanical engineers, received 24 days leave annually and other employees, 12 days. All shops were equipped with first aid kits and a doctor was on the premises for two hours every day.

4. The organizational setup is shown in sketch No. 2. The director, Victor Alekhandrovich, 25X1 The chief engineer, Leon Arutionovich,

5. The following is the legend for the First Automobile Repair Plant (the letters and numbers below are keyed to sketch No. 1):

(A) A small coal-fed casting furnace which turned out items, such as pulleys and cylinder jackets for motors, for use in the plant.

(B) Main building. This was a sheet metal-roofed, one-story, fireproof, 12-meter-high rubblework structure with skylights. It housed the following:

(1) Office of the shop chief 25X1

(2) Engine shop, equipped with two Soviet Komsomolsky vertical lathes, a well-used Khonik cylinder grinder a lathe for making bearing races and a 25X1 foreign-made lathe for making connecting rods. Between 22 and 24 engines were repaired daily in this shop. A total of some 65 persons, including technicians, worked in the engine shop and the shop chief's office.

(3) Testing stand; finished engines were tested in this section.

(4) Endless chain along which vehicles were drawn during the assembling process.

25X1

(5) Battery-charging section; one employee was assigned to this section

(6) Body repair shop; the some 45 to 50 workers employed in this shop used hand tools

(7) Office of the chief of the assembly shop

(8) Welding shop, where autogenous, electrode and copper welding was done; about 10 employees worked in this shop

(9) Office of the chief of the dismantling shop

(10) Warehouse where parts were stored

(11) Garage; plant vehicles as well as those under repair were housed here

(12) Section where parts removed from vehicles were cleaned

(13) Shop where vehicles were disassembled; some 110 to 120 workers were employed in disassembling vehicles and sorting out reusable parts.

(14) Chromium-plating shop; steering wheels were also repaired in this shop which employed about 15 persons, mostly females

(15) Sheet metal workshop; this shop employed about 40 persons

(16) Office of the chief of the machine shop

(17) Forging and tempering shop which employed about 10 workers

(18) Machine shop, equipped with about 40 machines (old lathes, planers, grinders, cutters and drilling machines), most of which were probably of Soviet make; about 70 or 80 employees worked in this shop.

(19) Repair shop, where miscellaneous repair work was done; some 15 to 18 employees worked in this shop

(20) Office of the chief inspector

(21) Testing laboratory, equipped with a Rockwell machine for measuring hardness (sic)

25X1

(22) Tool storeroom

(23) Tool shop equipped with a grinder, a planer, a milling machine, and a drilling machine; no details known about the equipment. About 35 workers were employed in this shop. 25X1

(C) Storage area protected with a covering or roof of uralite, supported by ordinary posts; iron was stored in this area.

(CH) Body shop. This was a one-story, sheet metal-roofed, fireproof, brick building about 25 to 30 meters long, 15 to 18 meters wide and 8 meters high. About 20 persons worked in this shop constructing and repairing vehicle bodies. The shop was equipped with two circular saws, two mechanical planers, a lathe and a drilling machine — all in good condition.

(D) Repair shop — a one-story, sheet metal-roofed, fireproof, brick building equipped with five pits (indicated on sketch No. 1 by the numbers 1, 2, 3, 4 and 5); the some 8 to 10 mechanics who worked in this shop made minor repairs and adjustments on repaired vehicles after they had undergone trial driving tests.

(E) Electric shop. All electrical repair work on vehicles was done in this shop which was located in a one-story sheet metal-roofed, fireproof, brick building which also housed (1) the office of the shop chief; (2) a storeroom stocked with electrical supplies; (3) a tool storeroom; (4) a room used by the inspectors. Some 90 to 100 persons worked in this building.

(F) A one-story, sheet metal-roofed, brick building containing the following offices: (1) secretary's office; (2) planning section; (3) office of the plant director; (4) office of the chief engineer; (5) technological and drafting section; (6) finance and accounting section; (7) payroll and contract section; (8) offices for Party and union secretaries and other personnel.

(G) Sentry box — a small, one-story brick structure which housed a guard who checked employees as they entered and left the plant.

25X1

INFORMATION REPORT INFORMATION REPORT

CONFIDENTIAL

[redacted]

25X1

COUNTRY USSR (Moscow oblast)

REPORT [redacted]

SUBJECT Kim Needle Plant in Kuntsevo and Unidentified Brass Part Produced for the Military

DATE DISTR.

NO. PAGES 8

REFERENCES RD

25X1

DATE OF INFO. [redacted]

PLACE & DATE ACQ.

SOURCE EVALUATIONS ARE DEFINITIVE. APPRAISAL OF CONTENT IS TENTATIVE.

25X1

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CONFIDENTIAL

[redacted]

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25X1

KIM NEEDLE PLANT IN KUNTSEVO AND
UNIDENTIFIED BRASS PART PRODUCED FOR THE MILITARY

1. The Needle and Platinum Plant i/n Kim (Igolno-Platinovyy Zavod imeni Kim) was located on Kalininskaya ulitsa in Kuntsevo. The plant was subordinate to the Ministry of Machine and Instruments Building; it did not have a numerical designation. The numbers in parentheses below refer to [redacted] sketch No. 1 of the plant layout on page 7 : 25X1

(1) Kalininskaya ulitsa. The entrance to the plant was on this street.

(2) Dwellings for plant workers.

(3) General store. This was a one-story brick building.

(4), (5), and (6) Construction supplies storehouses. Supplies such as tools were stored in these one-story brick structures.

(7) Transformer station. This was a 3 x 1.5 meter structure with a sheet-metal door. Cables were laid underground.

(8) Needle shop, machine shop with military production, and basement storage facilities. This was a two-story, with basement, brick structure measuring approximately 100 x 35 meters. A needle shop, located on the ground floor, produced many sizes of needles. This shop was equipped with a lathe, a milling machine, two drill presses and other unidentified machinery. The machinery had been produced at this plant and was in perfect operating condition. The machine shop, located on the second floor, produced spare parts for plant machinery and on occasion entire machines. This shop was equipped with four planers, ten horizontal lathes, five milling machines, twelve drill presses, eight grinders, three vertical lathes and two presses. This Soviet-make machinery was in good condition. The basement was used as a storehouse for these two shops. Approximately 400 persons worked in this building on two shifts. 25X1

A. Special Unidentified Brass Part for the Military

Beginning in July or August, 1954 and continuing for three months, an unidentified brass part represented on [redacted] sketch No. 2 on page 8 was produced in the machine shop described above. 25X1 This part, made of brass, was 15 millimeters thick and had a radius of about 325 millimeters. The center of each side was recessed about three millimeters from the edge or border. The holes marked No. 1 on the sketch had a diameter of about four millimeters, the holes marked No. 2 had a diameter of from two and a half to three millimeters. Special care was taken in the production of this part; any error, however slight, caused the part to be rejected. [redacted] 25X1
[redacted] he did not know the name of the part, or the 25X1 machine or device it was to be used in. He was only given a drawing of the part and no further information. The finished parts were picked up daily by the shop chief and taken to the shop storehouse. [redacted] 25X1 These parts had been ordered by military persons who had visited the plant in May or perhaps earlier in the year 1954.

One of these persons, a colonel (service unknown) ordered new machinery including lathes, drills and cutters to be sent to the plant. the lathes and drills were of German-make. the brass part was to be used in some sort of air-pressure device because the grooves appeared to be placed there for the passage of air.

(9) Acids Warehouse. A 6 x 6 x 6 meters hut contained piles of carboys of many unidentified acids. these were used in the laboratory (10); he did not know if any of the shops used acids.

(10) Laboratory. This two-story building measured approximately 30 x 8 x 10 meters. The first floor contained two electric ovens measuring about 60 centimeters deep and with a 20 centimeter door. some sinks, precision scales, trays similar to those used by photographers in developing work and air-measuring devices. About 30 persons, all women, worked in the rooms on the first floor.

(11) Electric welding shop. Not very much welding was done in the plant. Three persons were employed in this shop.

(12) Storehouse for usable scrap. This was a one-story wooden building measuring about 30 x 8 meters. One person was employed here. The scrap was classified according to type.

(13) Coal supplies. The coal was mixed with porcelain waste and used to polish the needles which were placed with the mixture in a revolving drum. One person was employed here.

(14) Porcelain waste storehouse.

(15) Setun River.

(16) Oilcloth plant.

(17) Polishing shop, needle shop and tool storehouse. This two-story structure with basement adjoined shop No. (8). The tool storehouse was located in the basement, the polishing shop on the first floor, and a needle shop on the second floor. This building was equipped with two Soviet-make lathes, an unknown number of drill presses, and an electric furnace for tempering the needles. Approximately 200 persons were employed in this building. The needle shop worked three shifts.

(18) Gardens.

(19) Forge, polishing shop, and platinum shop. This was a three-story structure with no basement. The forge was located on the first floor. A coal-fired furnace, two drop hammers, tongs and other equipment were located here. Three persons were employed in the forge. This floor joined the first floor of shop No. (17). The platinum workshop on the third floor was restricted; the reason for this was because the platinum might be stolen. Hypodermic needles were made here. A total of approximately 70 persons worked two shifts. Only shop personnel and the plant director were permitted to enter.

25X1

(20) Needle shop, polishing shop, ten-year school and tekhnikum. This was a three-story brick structure. A needle shop was located on the first floor, the polishing shop on the second floor and the ten-year school and tekhnikum on the third floor. Inspection of complicated parts was also done here. There was an unknown number of well maintained Soviet-make lathes, milling machines, and drill presses. Approximately 100 persons were employed in two shifts.

(21) Tempering shop. This was a one-story structure. The tempering shop was equipped with six electric and six or eight heavy oil furnaces. Approximately 30 persons were employed on each of the three shifts.

(22) Fuel dump. Two inter-connected underground gasoline tanks served the gasoline pump. Barrels of oil used in the tempering shops were stored here. One man was employed here.

(23) Needle shop and plant dining room. This was a three-story structure with needle shops on each floor. A portion of the second floor was set aside for the plant dining room. Approximately 600 persons were employed on each of the three shifts.

(24) Central heating, plumbing and electricians' shop. The central heating system was coal-fueled. Approximately 30 persons worked on three shifts.

(25) Archway leading into interior of plant.

(26) Packaging shop. This two-story building is where the needles were packed in cardboard boxes bearing the name of the plant and the needle size. Once packaged, the needles were transported to the finished products warehouse (27). About 30 persons worked one shift.

(27) Finished products warehouse. This was a three-story structure with basement. Products packaged above were stored on the first floor. The basement is described in point (38). The needles were stored according to type and size. Needles were also stored on the second and third floors.

(28) Plant main stairway.

(29) Needle shop, This three-story building employed about 1,000 persons in three shifts.

(30) Carpentry shop. Carpenters, masons, painters, plumbers and all other similar specialists were employed in this one-story structure measuring approximately 100 x 30 meters. Approximately 100 persons worked one shift.

(31) Plant club and workers' housing building. This was a three-story structure. The first story was for the plant club, and the second and third stories were for workers' living quarters.

(32) Small plaza.

(33) Clinic. This was a one-story structure. The clinic's staff consisted of five or six specialists, a director, four female nurses and one male nurse. Someone was always on duty at night.

25X1

[redacted] 25X1

(34) Garage. This one-story structure contained grease pits and equipment to service the plant vehicles which consisted of from 12 to 15 5-ton trucks, four small automobiles, two buses, and an ambulance. Approximately 25 persons were employed here.

(35) Stable. Three or four horses were stabled here.

(36) Raw materials storehouse. This was a wooden structure measuring approximately 30 square meters. This storehouse supplied the shops with raw materials. Only one person was employed here because the shops sent their own men to pick up needed supplies.

(37) Underground one-room storehouse. The steel wire used in the production of needles was stored in this structure which was about two meters underground and measured approximately 40 x 20 meters.

(38) Strip steel storehouse. This was a continuation of underground warehouse No. (37) and was part of warehouse No. (27).

(39) Administrative building. The administrative offices, the library and the CP Secretariat were located here.

(40) Kennels. Approximately forty dogs and pups were kenneled here.

Raw Materials

2. The raw materials used were strip steel, wire, brass, wood, cardboard, rags, coal, charcoal, oil, grease, gasoline, alcohol, acid, oxygen, acetylene, tin, lead, emery stone and porcelain waste. These were brought into the plant by truck.

Water Supply

3. The plant was served by an underground water system. The plant had no water tanks.

Electric Power Supply

4. [redacted] the electricity was from the regular Moscow city supply. The plant used 220 volt electricity. 25X1

Working Conditions

5. The plant employees worked a daily eight hour shift except for Saturdays when they worked six hours. Workers received an average of 15 working days vacation each year. The average monthly wage was 1,200 rubles. The plant shops were well ventilated and frequently visited by doctors from the plant clinic; the occulist made almost a daily visit.

Security Measures and Fire Precautions

6. The plant had a three-meter high metal fence on its northern boundry and a three-meter high wooden fence on the other three sides. For location of guards see [redacted] sketch No. 1 on page 7 ; guards armed with pistols are represented on the sketch by dots, guards armed with rifles are represented by a dot within a circle. Dogs were used for guard purposes and were stationed as follows: Four or five on the river side, one in the Finished Products Warehouse - No.(27), one on the second floor of the Packaging Shop - No.(26), one on the second floor of No.(23)- The Dining Room, and one on the third floor of No.(19)- the Platinum workshop. Guards patrolling the plant were always accompanied by two dogs. A pass was required to enter the plant. Once inside, however, one could move about 25X1

[redacted] 25X1

the entire plant except for the restricted Platinum Shop - No. (19). Fire precautions consisted of about 20 not very efficient firemen equipped with two fire trucks.

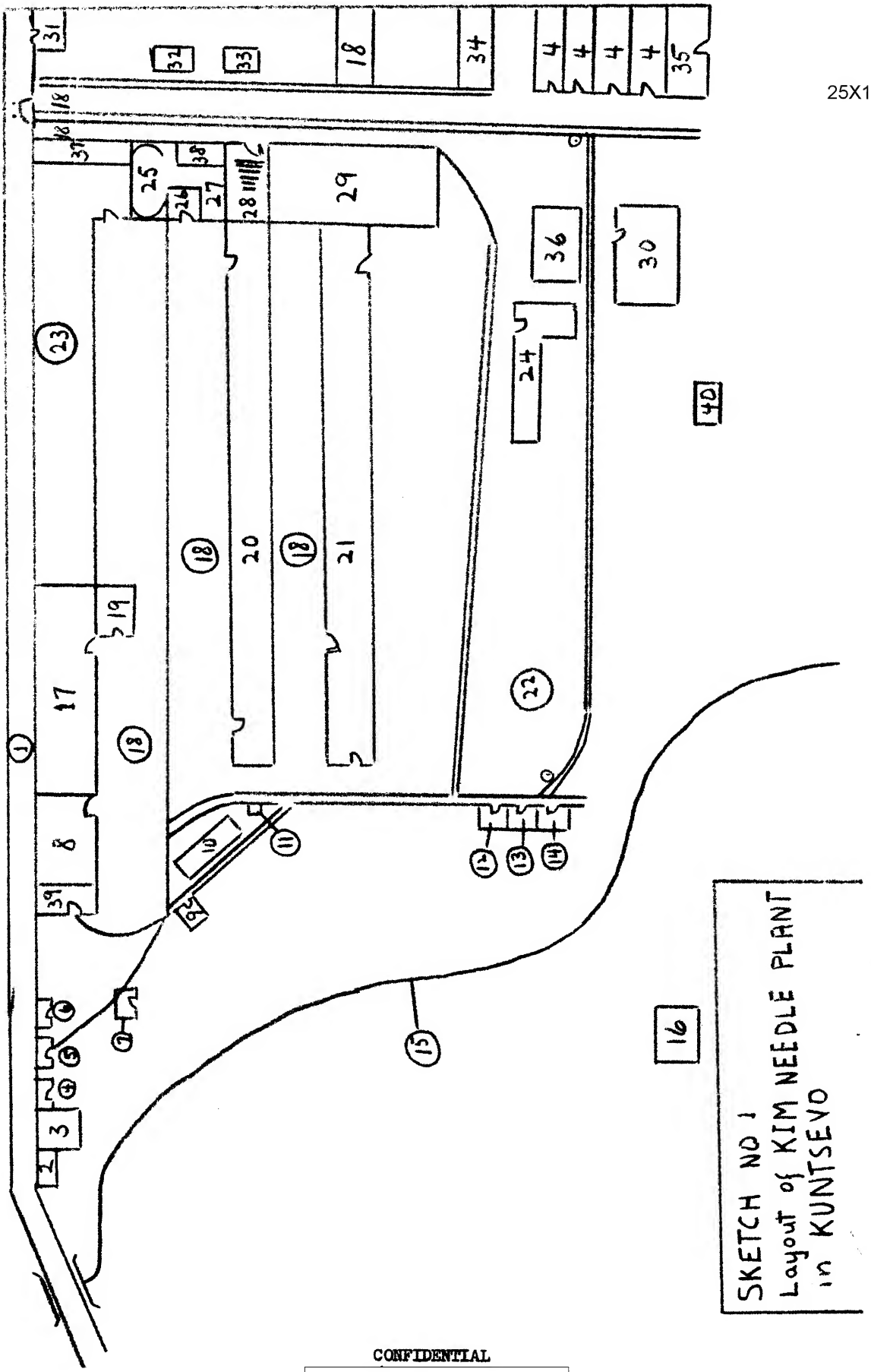
Plant Organization and Personnel

7. The plant director was named Abramovskiy (fnu); he was considered to be very capable. There were two deputies, one of whom was a technician, and the other who was an administrator. There was also a chief engineer and his deputy. [redacted] Shop No. (8) had a chief shop engineer, four foremen, and a chief inspector. [redacted] the entire plant personnel at approximately 3,000 or 4,000 persons. 25X1 25X1

Conversion to War Production

8. [redacted] the plant could be converted to war industry because of the variety of machinery but he did not know how long such a conversion would take. 25X1

25X1



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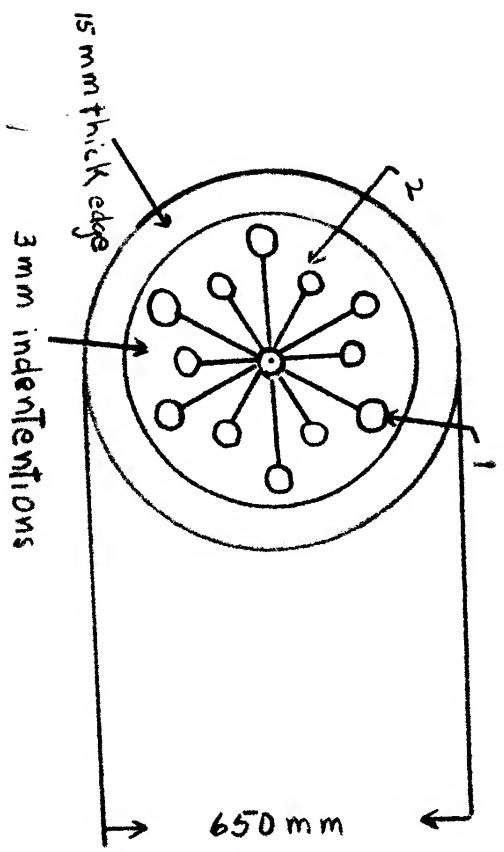
SKETCH NO. 2
Unidentified Brass Part made for the Military in KIM NEEDLE PLANT in KUNTSEVO



1) 4 millimeter diameter
2) 2½ to 3 millimeter diameter

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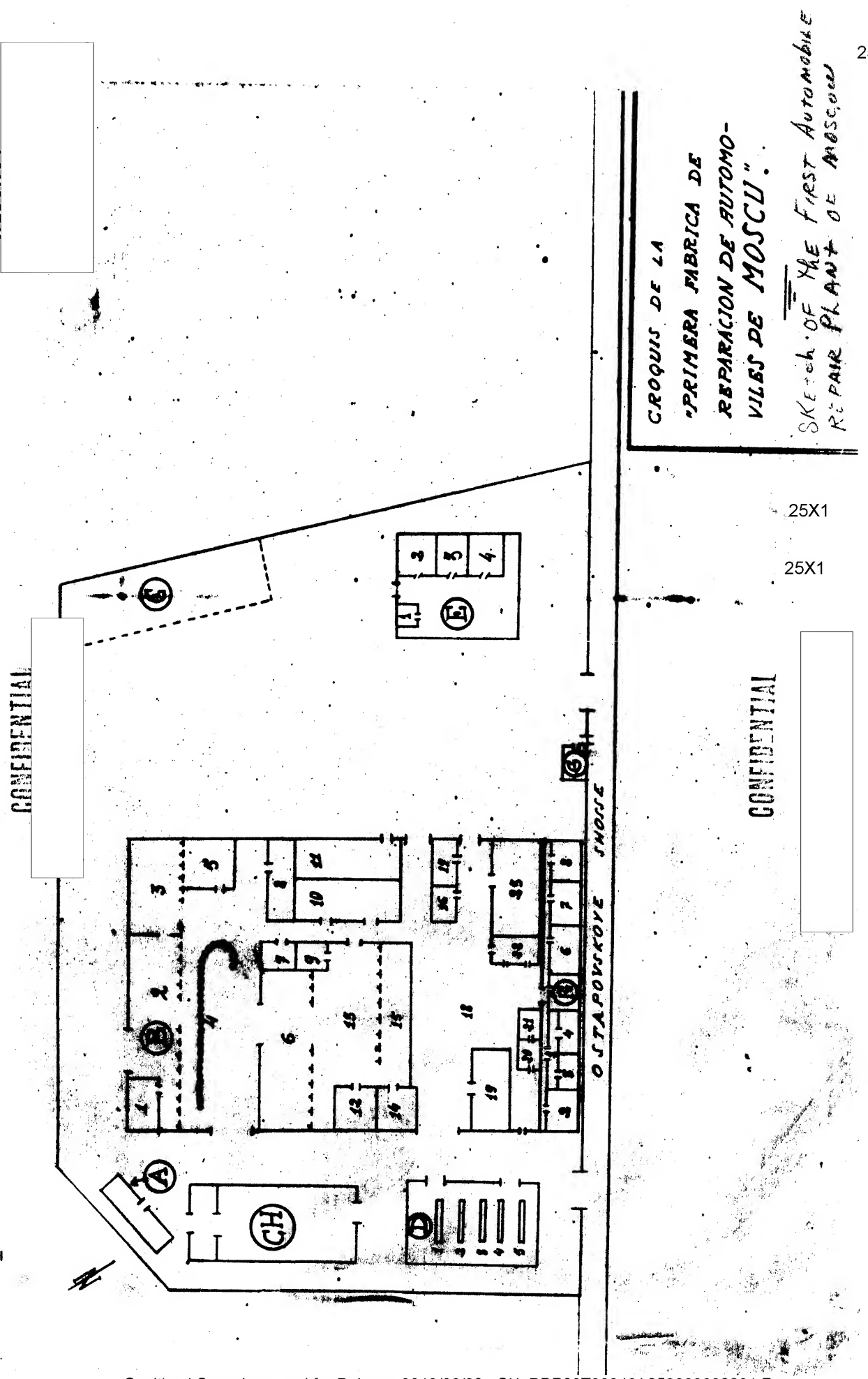
25X1



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 25X1

C-O-N-F-I-D-E-N-T-I-A-L

FIELD INFORMATION REPORT

COUNTRY: USSR (Ukraine, Sumy Oblast)

SUBJECT: Frunze Plant, in Sumy

REPORT NO. [redacted]

DATE OF INFO:

DATE ACQUIRED

DATE OF REPORT

25X1

GENERAL:

1. The Frunze Plant, not known by any other name, was subordinate to the Ministry of Light Industry [redacted] this 25X1
plant may have depended on others, since it was connected with another plant with the same address and administrative offices, known as the Pump Plant, until 1951 or 1952 when an order was issued separating them. Both plants were located about one mile north of the city one on each side of the railroad station. (See Annex IV, page 17). Because plant wages and work schedule corresponded to those of the Ministry of Light Machine Industry, [redacted] 25X1
the plant depended on that Ministry.

PLANT LOCATION:

2. The plant was located north of the city and was

C-O-N-F-I-D-E-N-T-I-A-L

25X1

bordered by the KHARKOV-KIEV railroad on the north, PRIVOKZALNAYA ulitsa on the south, the street that led to railroad station on the east, and PARNOYE shosse on the west.

PLANT DESCRIPTION:

3. ~~A 2.5 meter high~~ The 3,000 meter plant perimeter was bordered by a 2.5 m high wall of rubblework where it bordered the street and brick or wood where it bordered the railroad station. Besides the railroad entrance, the plant had two entrances, one on its north and one on its south sides. The plant faced west. It had no underground installations.

4. Military shop No. 4 (Annex I/28, page 14), classified SECRET, was housed in a concrete, brick and structural steel building of recent construction, and was being greatly enlarged. In 1955, two metal towers were under construction on the floor of this shop. Only the framework of one of the towers was almost finished, described as follows: it was of metal construction, about 15 meters high; its skeleton consisted of columns of four 150 mm. in diameter, 15 mm. thick tubes, one welded over the other and, in turn, each one given consistency or support by another series of tubes placed in a criss-crossed fashion from one to the other within the tower. (See Annex V, page 18). Each side of the base was 3 meters long and it was 2-meter high sheets were to be welded one on the top and one on the bottom of the tower. these sheets lost their shape whenever electridally welded thus creating a problem which made the sheets useless for the purpose desired.

5. [redacted] Shop no. 3 (Annex I/33, page 14), was frequently visited by air corps inpectors who [redacted] went to make compression chamber tests in order to advise slight modifications or corrections. Shop no. 4 (Annex I/28, page 14) was a military shop classified SECRET, and although [redacted] it had a large number of military personnel, the majority of the workers were civilians.

DESCRITION OF EACH SHOP BUILDING:

6. Shop No. 3 (Annex II, page 15) was a 200 x 100 x 15-meter reinforced concrete, red brick, fireproof, one-story building, without basement and with the roof shaped like a series of inverted Vs, resting on steel beams with windows along both sides of the length of the building. Offices, a recreation hall, a clothes closet, and a small precision tool and expensive equipment storage area were located on an elevated floor within the building.

7. A small projection on building's south side extended towards the west. Three types of sugar refining rotor engines were manufactured in this shop as follows: a vertical-axle machine with a hopper on the top end; a more modern horizontal-axle machine with a side hopper; and an even more modern and larger vertical-axle machine with part of it buried underground. (See Annex III/3, page 16). Of the first type, about 30 were manufactured monthly; about 5 or 6 of the second type (Annex III/3, page 16); and about 50 of type 3. Plant production of machines sent to the Ministry of Chemical Industry was not large. Few errors were made in the

manufacture of these machines since there was a special testing machine which checked the margin of error and sent the rejected part to the fitting shop for even the smallest defect. The majority of the plant machinery was of Soviet-make and of good quality and well-maintained. About 500 persons worked in this shop; three daily shifts manned the lathes.

8. Rail transportation was used exclusively. Most of the machinery was labeled for the Ministry of Food Industry, but one type of machinery, drum-like in shape, made up by cylindrical tubes introduced into hermatically-sealed receptacles, was labeled for the Ministry of Chemical Industry, although it was also destined for sugar refining.

PRODUCTS:

9. The plant-produced machines, except for those destined to chemical industry, were called centrifugal machines marked with Plant name (SUMSKOI MACHINO-STROITELNIY ZAVOD IMENI FRUNZE), of about 150 cm. in diameter, an about 8 mm. wall thickness, an 8,000 kilogram weight, and a cast-iron base.

10. Aircraft decompression chambers were also built in shop no. 3. military groups frequently came to inspect the equipment under production. This section and shop no. 4, then under construction, were the only shops engaged in military production. decompression chambers were labeled for the air force where, according to rumors, they were used for test pilots adaptation experiments for special test flights. Other plant-produced centrifugal machinery was destined for sugar refinery.

military shop no. 4 may have had special machinery equipment prepared for installation within the plant after completion of plant building.

MATERIALS:

12. the following: coal, coke, charcoal, lumber, rust-proof sheet iron, soft iron in billets and sheets, brass, bronze, nickel, glue, chromium, grease, oil, petroleum, gasoline, cotton material, cables, sand, molasses (PATOKA) used in the foundry for the casting mold, aluminum sheets and wire. The materials were brought in by railroad; highway transportation was insignificant.

WATER SUPPLY:

13. Since plant water supply was normal even when the city had none, the plant had its own water deposits Large diameter cast iron pipes were laid deep underground for protection against freezing winter temperatures. Plant utilized large amount of water.

POWER SOURCE:

14. it was said that plant used thermo-electric power from the DONBAS. The plant power station was housed in a small building, with a skull and crossbones, and the word DANGER painted on its door, in the approximate center of the plant (Annex II/27, page 15).

The lathe shop used 320 volt electricity. Electric power was adequate for plant requirements.

PACKING:

15. Heavy tar-paper, pine wood and strong cage-like boxes

25X1

were used for packing. Extreme care was taken so that loading cranes did not damage the wedged-in, boxed machinery. Goblets painted on the boxes indicated proper handling position.

TRANSPORTATION:

16. The plant's own standard Soviet-gauge railroad sidings connected with the KHARKOV-KANATOF railroad line and entered the plant through the north area. Annex I, page 14 , shows sidings in plant area. There was not much train movement, and plant railroad installation was not being enlarged. The locomotives were old and small. Some of the platform-type, four-axle flat cars were very modern and of 60-metric ton load capacity. Cranes, for top-loading trains were located in yards and railroad-served buildings.

ROADS:

17. PARKOYE shosse, a 10-meter wide, all-season, well-drained road, where mud accumulated after rains, served the plant. This road was adequate considering that most plant traffic was handled by railroad, and that the approximately 50 five- three- and two-ton old ZIS 105, ZIS 150 MOLOTOV and GORKIY trucks utilized by the plant carried light freight, were never loaded to full capacity, and used only irregularly and to places without railroads. A small repair shop serviced these trucks which were parked in the open-air.

STORAGE:

18. Annex I, page 14 , indicates plant storage areas [redacted] lumber deteriorated the most as it cracked in the winter. As safety measures in these areas, an OKHRANA guard warned against smoking near inflamable matter, and shops were equipped with sand, foam ejecting fire extinguishers and water hydrants for hoses.

25X1

25X1

WORKING CONDITIONS:

19. An eight-hour day, 46-hour week was a workman's schedule. The plant operated on a two 8-hour and one 6-hour shift basis. 13-day annual leaves, usually in the summer, plus Sundays and holidays off were granted to employees. 25X1 Sanitary conditions were good. 25X1

PLANT SECURITY:

20. Eight of about 20 armed guards with dogs tied to wire nets inside the plant-area wall guarded the area and gates at all times. The PROPUSK (permit) was required to enter the plant. Workers could arrive up to five minutes late, after which they were marked absent and not allowed in. All shops, except no. 4, could be freely entered.

PERSONNEL:

21. The plant employed approximately 6,000 workers. Sometimes groups of 15 Chinese worked at the plant for four to six months periods. 25X1

PRODUCTION DEFICIENCIES, IMPROVEMENTS AND ENCOURAGEMENT:

22. new Soviet-type DIP 500 and 600 lathes, to increase plant output, were being installed in plant. Delay in arrival of needed production materials was plant's main difficulty. 25X1 plant could have been totally converted to war production within three months. 25X1

LEGEND TO SKETCH I, PAGE 14, OF FRUNZE PLANT BUILDINGS AND AREA IN SUMY.

1. Kharkov-Kiev doubletrack railroad line.

2. Plant railroad siding entrance.

3. City of Sumy railroad station.

4. Boiler and forge shop, a 200 x 100 x 25-meter brick structure with a sheet-metal roof.

5. Shop for the sand-blasting and pressure cleaning of plant materials; an 8 x 8x 6-meter shop building.

6. City railroad station warehouses.

7. Railroad square and siding which led to the Pump plant east of the station and next to the sugar refinery.

8. Scrap-iron, sheet iron and sand dump.

9. Machine shop no. 1; a 120 x 30 x 12-meter one-story building.

10. Red-Cross clinic for plant employees.

11. A 20 x 10 x 12-meter, two-story brick storehouse, with a metal stairway on the outside and freight elevators inside, where bronze, copper, nickel and other expensive metals and materials were housed.

12. Pipe and wire dressing shop. This was a 30 x 15 x 7-meter brick and steel building, equipped with forges and small drop hammers.

13. Shed housing a small vehicle-repair shop.

14. Small petroleum, gasoline, grease, paint warehouse.

15. Scrap-iron dump.

16. Scrap-iron dump.

17. Instrument shop (not further identified). This was located in a 200 x 20 x15-meter one-story building.

18.. Machine and assembly shop no. 2; a 200 x 80 x 15-meter one-story building.

19. Parking area for plant trucks, and for truck loading of boilers or decompression chambers destined for the Air Forces.

20. Area to be eventually occupied by the annex, under construction, of SECRET shop no. 4.

21. Location of a type of manufacturing school, located outside the plant area and on the street leading to the railroad station.

22. Plant main entrance.

23. Building housing the compressors and boilers that supplied the plant with air pressure.

24. Small metal shed which stored pipe, angle irons, bars and wire.

25. A 20 x 10 x 7-meter two-story brick building consisting of a dining room and kitchen.

26. Gardens and wooded area in center of plant area.

27. Small house where the plant electric transformer was located.

28. SECRET shop no. 4, controlled by air corps military personnel and engineers.

29. Plant administration offices were located in this 15 x 20-meter two-story brick building.

30. Plant personnel bicycle and vehicle shed. This structure, as the one above, was entered from an outside entrance. A rubblework wall separated

these structures from the plant.

31. Foundry shop, where all plant small and large parts were produced, housed in this 200 x 100 x 15-meter brick building.

32. Plant coal dump.

33. Machine and assembly shop no. 3, where centrifugal machines, and compression or depression chambers for air-force experiments were assembled. Plows and other agricultural machinery and autoclaves were also manufactured here. This 200 x 100 x 15-meter building, with a structural metal and glass saw-toothed shape roof, appeared to be one-story high on the outside, but inside, where shop offices were located, it was two-stories high. SECRET shop no. 4, only partly used since it was under construction, was annexed to this building.

34. Dump for foundry scraps, rejects, and unusable parts. Coal and coke were also dumped in this area.

35. A pattern shop, housed in this 25 x 15 x 10-meter two-story brick building.

36. Plant consumer production shop. This was a 25 x 15 x 7-meter one-story building, where plant machinery was repaired. Here, nickel and iron beds, and other consumer articles were manufactured. Screws, nuts, bolts, angle irons were also produced in this shop.

37. Carpentry shop. Patterns and packing cases were made here. Stocks of lumber were stored in this area. This was a 15 x 8 x 6-meter wooden structure.

38. Plant entrance on PRIVOKZALNAYA ulitsa.

39. PRIVOKZALNAYA ulitsa.

40. City jail with the same name as the street on which it was located.

LEGEND TO SKETCH II, PAGE 15, OF FRUNZE PLANT SHOP NO. 3.

1. Washroom.
2. Instruments section.
3. Small tool and equipment shop.
4. Shop.
5. Main hallway.
6. Compression chambers (BUROVKAMERA, sic.) assembly section no. 5.
7. Forge section.
8. Autogenous welding section.
9. Electric automatic welding section.
10. Electric spot welding section.
11. Adjustment section no. 4.
12. a) Machine section, consisting of two large disc drills, one bridge plane, and several other machines.

    b) Machine section with seven milling machines, two of which were 50 mm. each, and two vertical planes.

    c) Machine section with six drills, eight planes, and six lathes, three of which were large.

    d) Machine section with several lathes, cutters, drills and ordinary grinders.

    e) Machine section with 30 between two- and seven-meter center lathes.
13. Shop supply storehouse.

14. Assembly and packing shop. There were eight jib cranes with a capacity of between 5;000 and 15,000 kilograms to 20,000 kilograms in this shop.

A. SECRET building manned by military personnel and engaged in military-nature tasks, not further identified.

B. Section of SECRET building under construction.

LEGEND TO SKETCH NO. 3, PAGE 16 , OF FRUNZE PLANT MANUFACTURED MACHINERY.

1. Sugar vertical centrifugal filter.

2. Large sugar vertical centrifugal filter, a third of which was set underground.

3. Sugar horizontal centrifugal.

4. Cylindrical container which locked hermetically and which rotated mechanically on its horizontal axle and which, according to [redacted] was also used for sugar refineries. 25X1

5. Drum formed by tubes joined to two rings from which two tubes connected with the central exle which, in turn, stuck through the cylindrical container.

[redacted] 25X1

LEGEND TO SKETCH IV, PAGE 17 , LOCATION OF FRUNZE AND PUMP PLANTS.

1. KHARKOV-KIEV railroad line.

2. Road to KIEV.

3. City railroad station.
4. Route to the cemetery.
5. Frunze Plant location.
6. Railroad station storehouses.
7. Street leading to railroad station.
8. Road leading to sugar refinery.
9. Trade school.
10. Park-like zone consisting of a forest or wooded area.
11. Railroad connection with Pump Plant.
12. Pump Plant approximate location.
13. Sugar refinery approximate location.
14. City jail.
15. Partly urbanized roads leading to downtown Sumy.

Layout of Frunze Plant in Sumy

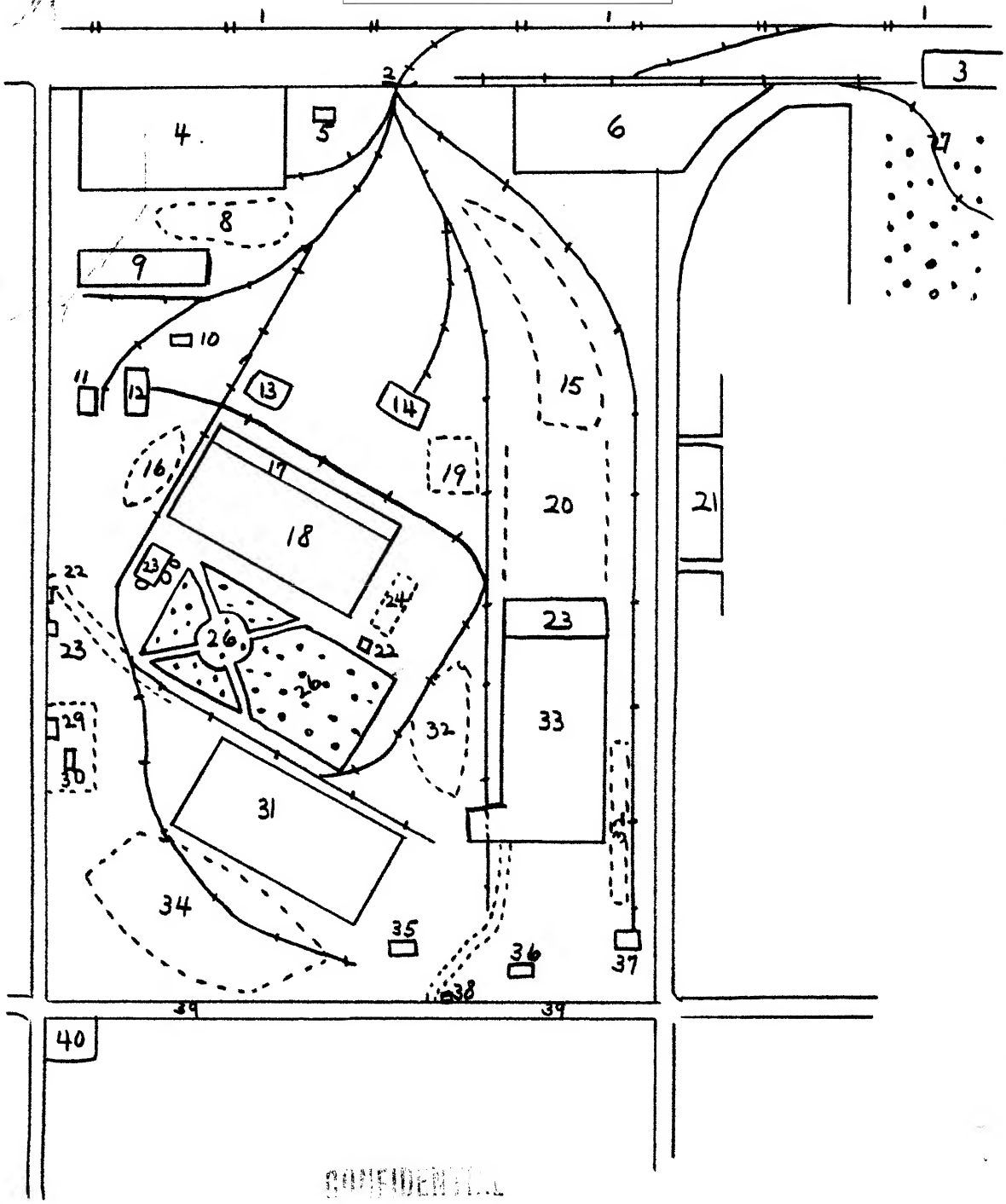
ANNEX I

Scale 1:5000

[redacted]

CONFIDENTIAL

25X1



CONFIDENTIAL

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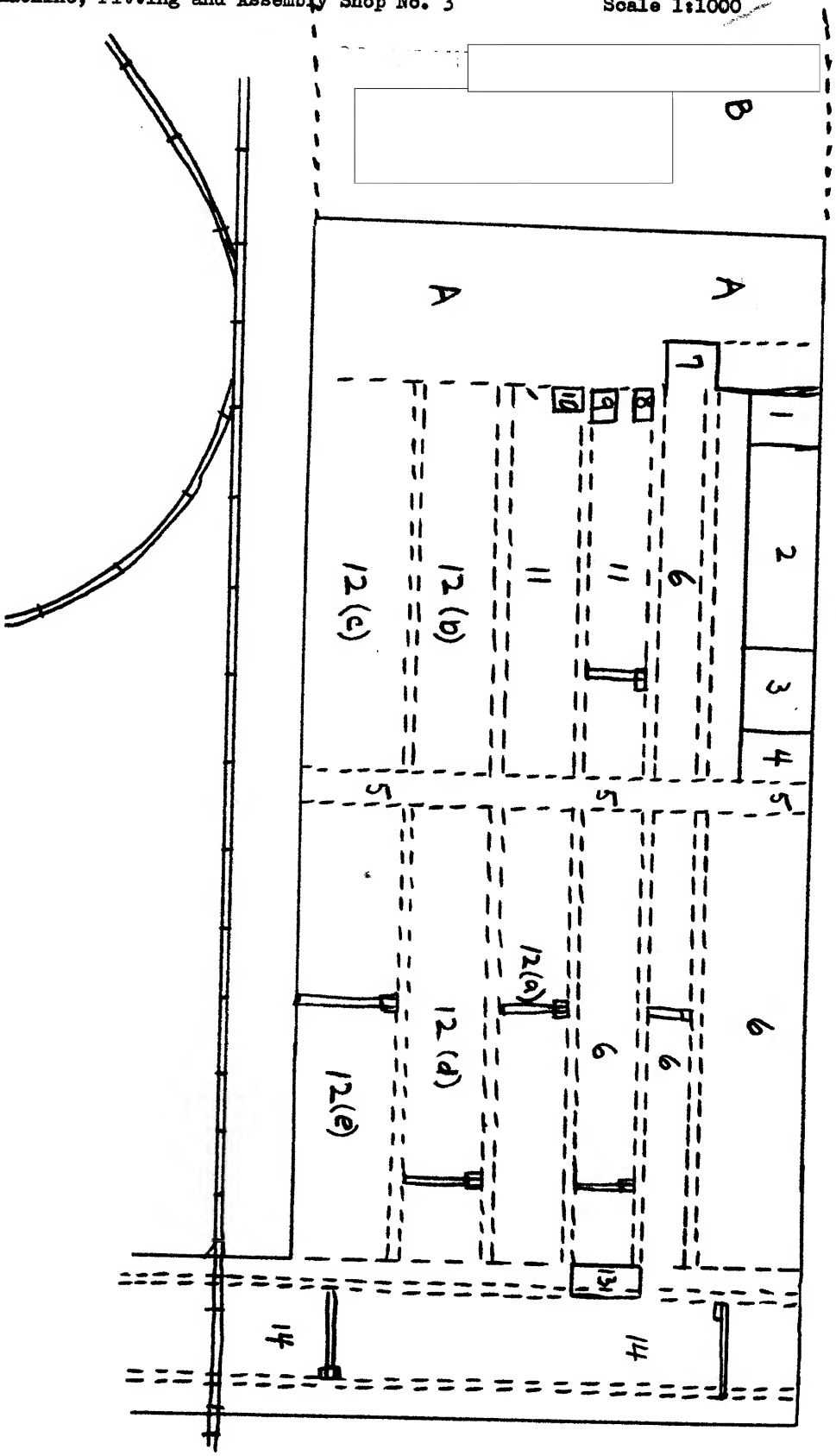
25X1

ANNEX II

Frunze Plant in Sumy
Machine, Fitting and Assembly Shop No. 3

Scale 1:1000

25X1



25X1

ANNEX III

Sketches of sugar-refinery Machinery Produced at Frunze Plant

No scale

25X1

25X1

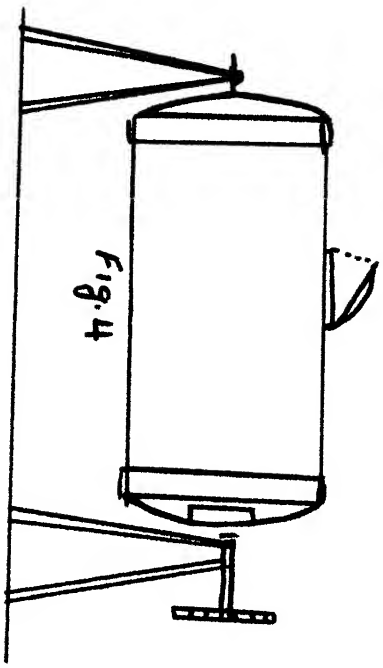


Fig. 4

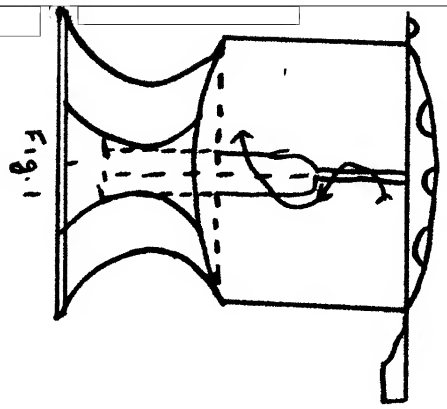


Fig. 1

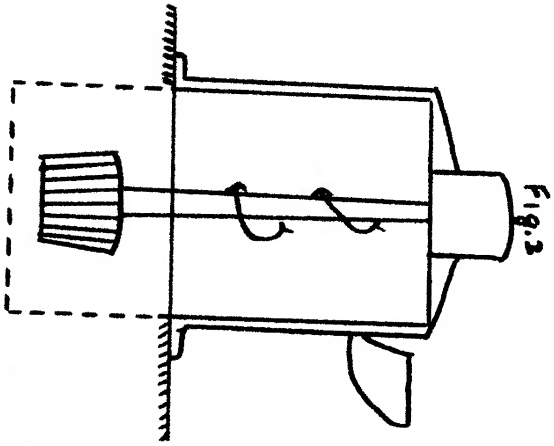
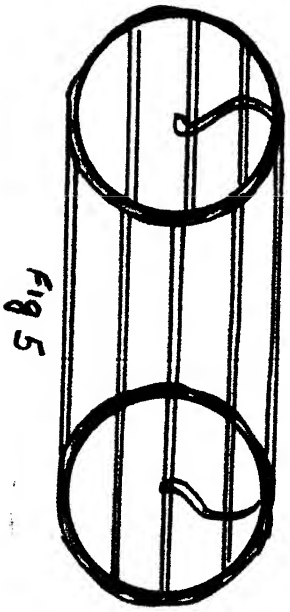


Fig. 2



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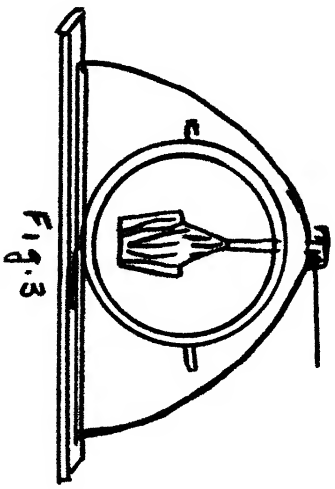


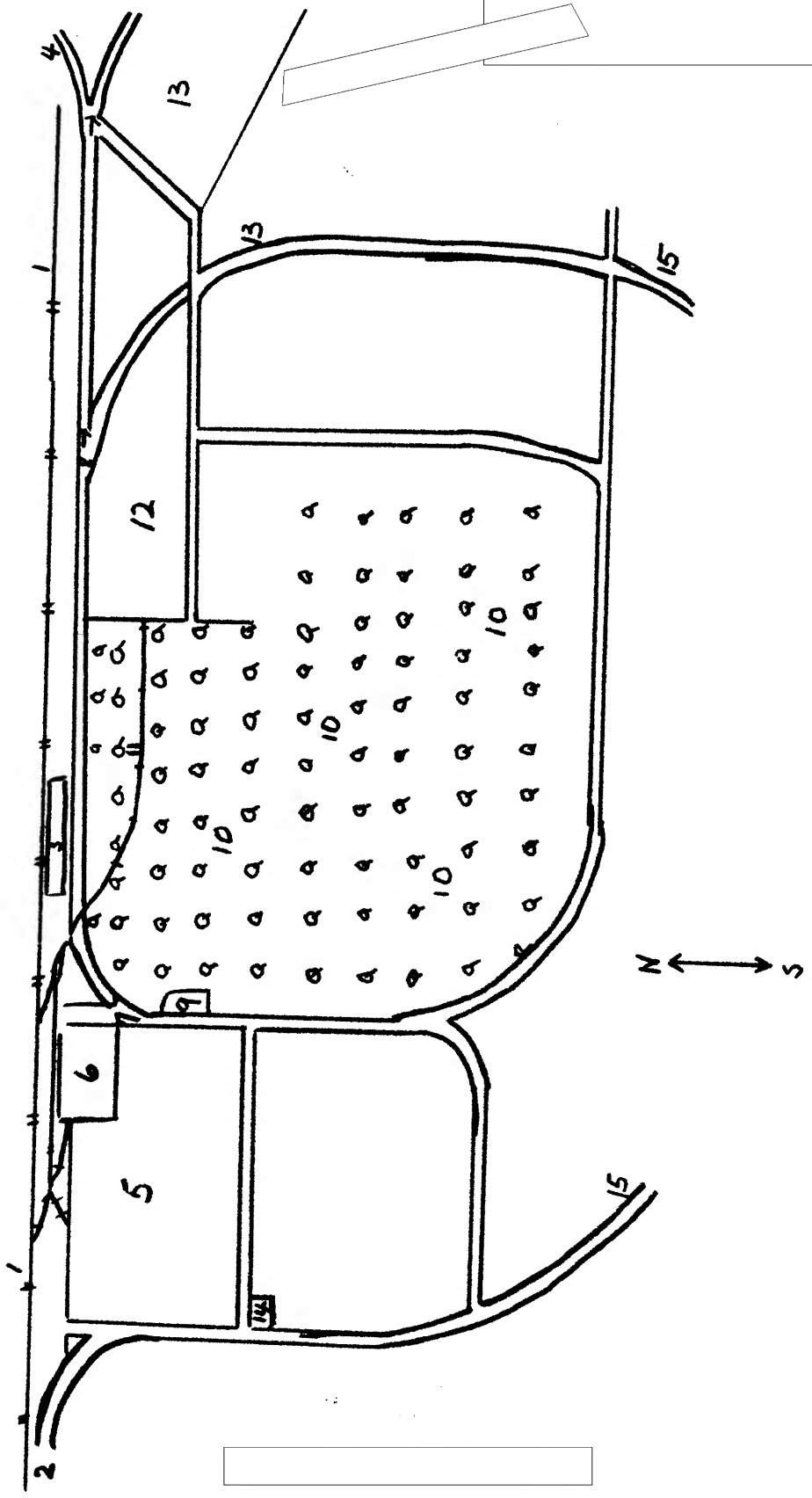
Fig. 3

25X1

Sketch of Area in Sumy where Frunze and Pump Plants were Located

No scale

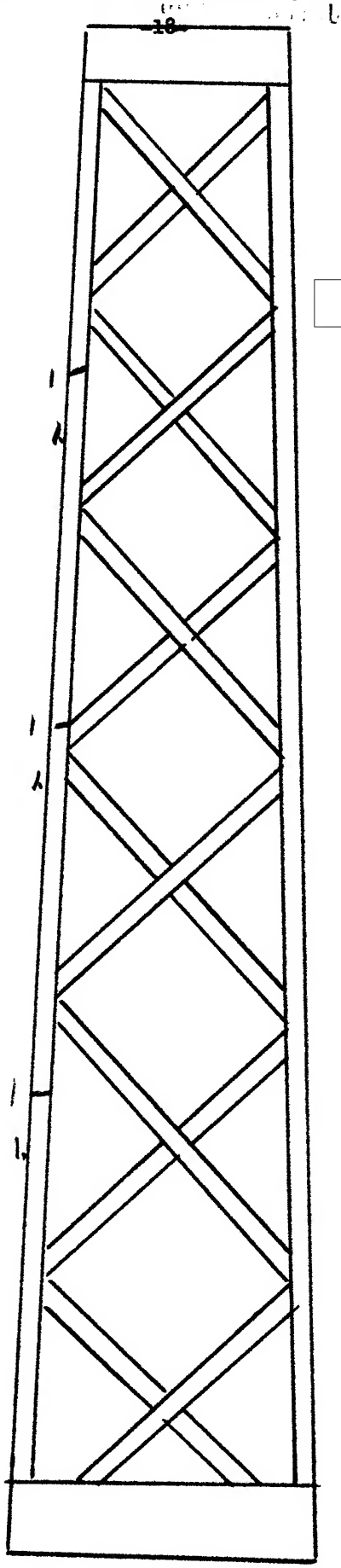
25X1



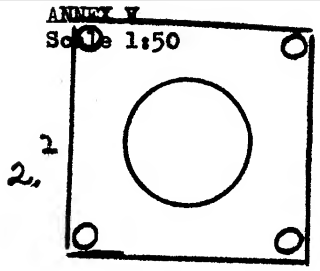
25X1

25X1

METAL TOWER UNDER CONSTRUCTION IN SHOP NO. 4 OF FRUNZE PLANT IN SUMY



ANNEX V
Scale 1:50



25X1

Tower

1. Tubes
2. Top platform

25X1